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TEACHERS OF CHILDREN WHO ARE MENTALLY RETARDED

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 reporting on the nationwide study, "Qualification and Preparation of Teachers of Exceptional Children," which since 1952 has been one of the major projects of the Office of Education. The manner in which this activity has been conducted is an example of cooperative action among persons from many organizations, school systems, colleges and universities, and the Office of Education. The information was supplied, for the most part, by persons whose main responsibility is for the education of exceptional children. It was recognized by those planning the study that opinions from general educators, from parents, and from lay groups would also have been valuable. It was, however, decided to delimit this study—which is an extensive one—to special educators. In all, approximately 2,000 persons have contributed to the project.

This publication reports that part of the information from the broad study which has bearing on the qualification and preparation of teachers of children who are mentally retarded. The Office hopes that it may be helpful to teachers preparing for this type of service, to directors and supervisors, to local school administrators, and to instructors in colleges and universities offering professional preparation to potential leaders in the education of handicapped and gifted children.

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Acknowledgments

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

◆ The Association for the Aid of Crippled Children, for their cooperation throughout the project.

◆ The members of both the National Advisory and the Policy Committees, for their wise counsel and guidance.

◆ The consultants who gave advice on special problems.

◆ The teachers of mentally retarded children who carefully completed extensive inquiry forms.

◆ The members of the Competency Committee who prepared a statement of the distinctive skills and abilities needed by teachers of children who are mentally retarded.

◆ The educators who assisted in developing and pretesting items contained in the inquiry forms, among whom were: Elizabeth Biles, J. J. Blindt, S. Brot, Chris J. DeProspo, M. P. Fletcher, Mrs. Corrie H. Hamer, Gerald S. Hasterok, Lillian Hill, Karleen M. Hoffman, Jane Johnson, John S. Keefer, Mrs. Margaret R. Kiernan, Herbert R. Lichtman, Edward Looney, Gloria Panitch, Mildred Schwartz, Howard H. Spicker, Eugene Straley, Rebekah Talbert, Ada Valentine, and P. O. Wagner.

◆ Naomi Nehrer, Albert Pelley, and Ann Stevenson of the study staff, who had responsibility for collating and preparing data for publication.

◆ Herbert S. Conrad, director, Research and Statistical Services Branch, Office of Education who has played an important part in the planning and execution of this project, and Mrs. Mabel C. Rice and other members of that staff who assisted in the planning and execution of some of the statistical operations.

Introduction

IN RECENT YEARS public interest in the problems of children who have exceptional educational needs has grown very rapidly. This interest has been especially strong in problems of mentally retarded children.

Some of the causes of this development can be identified. The success of specialized programs of teaching these children is one of the more important. New knowledge in the field has stimulated the hope of future expansion of knowledge on this subject. Active and articulate parent groups are contributing to public acceptance and understanding of these children and their needs. As professional leadership in State and local school systems has developed, more and more retarded pupils are being identified and served. State legislative and financial school support have accelerated the growth of programs.

The widespread interest and action have created an unprecedented demand for numbers of teachers to work in this area. It is generally agreed, however, that programs should not be expanded at the cost of lowered quality of instruction. On the contrary, there has been a reawakening of interest in the improvement of instructional programs.

Interest in the improvement of the quality of instruction has been shown by the teachers themselves, by State and local school officials, parent-groups, and teacher preparation institutions. In order to throw new light on the problems involved in securing well qualified teachers, leaders in the field have considered it necessary to analyze further some of the elements essential to adequate professional preparation. What are the specialized competencies that the teacher of the retarded child should have? What types of experiences might contribute most to the development of these competencies? The importance of these problems in all areas of exceptionality seemed so great that a study was initiated on a nation-wide scale.

This publication reports that part of the broad project on *Qualification and Preparation of Teachers of Exceptional Children* which deals specifically with the distinctive skills and abilities needed by teachers of mentally retarded children.

It includes information on: (1) Competencies needed by teachers of children who are mentally retarded; (2) opinions on the proficiency of some teachers of mentally retarded; (3) education and experience for acquiring the competencies (4) summary and implications, and (5) areas for further study.

HOW INFORMATION WAS COLLECTED

Since no inventory of competencies was available, a major focus in this study was the identification and evaluation of the knowledge, skills, and abilities necessary to the teacher. The study was limited to those competencies distinctive to the field of mentally retarded children.

In the examination of competencies, information was gathered by two techniques.[1] First, a committee of experts prepared a report identifying and describing the competencies which they thought to be important and distinctive for teachers of retarded children and youth.[2] In the second approach, a list of competencies was submitted (through inquiry forms) to superior teachers of the mentally retarded for evaluation as to importance.

All the other information presented in the report was collected *by means of inquiry forms*.[3] The teachers were requested to evaluate their own proficiency in the competencies they had rated for importance. Parallel information was collected from State and local directors and supervisors of special education who were asked to rate the proficiency of some recently trained teachers of the mentally retarded. College staff members, as well as these three groups, rated the importance of regular teaching, amount of student teaching required, and some general patterns of professional preparation.

This report, therefore, presents national opinion of recognized professional workers in the field on the special competencies required of teachers of the mentally retarded and on some of the professional experiences that may be needed in developing these competencies.

It is hoped that the findings of this report will be of value to a wide range of professional workers concerned with improving the quality of teaching in the field of the retarded. It should serve as an aid to those in the field of teacher preparation in the layout of teacher training programs. It should be helpful to supervisors as a tool in conferences with individual teachers, and in planning in-service programs with them. Finally, it should be helpful in the development of certification standards by defining more clearly the types of preparation which should be required of the teacher.

[1] See appendix A for a more complete outline of the plan of the study.
[2] The full report of this committee appears in this publication on pages 3 to 22.
[3] See appendix D for excerpts from the inquiry forms.

Competencies Needed by Teachers

THIS SECTION of the report deals with the specialized competencies needed by teachers of mentally retarded children. It contains: (1) The competency committee report, and (2) the list of competencies included in the inquiry form and rated by teachers. First the committee report is reproduced in as nearly verbatim form as is editorially possible. Second, results from the teachers' responses to the inquiry forms are reported with the items arranged in rank order of importance as evaluated by the teachers. This is then followed by a general discussion of the findings.

Some of basic guidelines set up for the competency committee report were as follows:

> It is understood that we are producing a professional statement of goals to be achieved rather than something which can be immediately translated into State certification standards or teacher education programs. What we as committees agree upon as desirable competencies will be continuously modified by the results of research and the growing body of funded knowledge . . .
>
> The distinctive competencies should be qualitatively and/or quantitatively defined, i.e., distinguished from, or additional to, those needed by personnel concerned with the so-called normal child. Committees are *not* expected to list the competencies needed by the regular classroom teachers . . .

THE COMPETENCY COMMITTEE AND ITS REPORT

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

The committee has accepted the definition of a mentally retarded child as one who is handicapped, educationally and socially, because of low intelligence to the degree that he requires special educational facilities.

The mentally retarded may be classified into three categories:

Group 1.—This group is composed of individuals for whom some degree

of independence and self-support is possible economically, socially, and occupationally, even though moderate supervision may be necessary.

Group 2.—This group is composed of those for whom little or no self-support is anticipated, although improvement is possible, especially in self-care, social and emotional adjustments, and some habit skills. These children usually require continuous supervision.

Group 3.—This group is composed of those for whom neither self-support nor other significant improvement is anticipated. These children will require permanent custodial care.

Note. Traditionally, with wide variations for individual cases, the approximate IQ ranges are: Group 1—50 to 70 or 75; Group 2—30 to 50; Group 3—0 to 30.

There are types of physical handicaps in which the defect and the need for specialized teaching skills seem obvious to everyone. When one of the sense modalities is damaged or destroyed, for example, at least some specific teacher competencies may be defined immediately. Even in such cases, however, there will be specific teaching knowledge, skills, abilities, and matters of methodology which are controversial or need further clarification.

Mental retardation is a defect which is less obvious to the ordinary observer. Nevertheless, the handicap is no less real because it is less obvious. Some of the learning difficulties may be quite subtle. For example, one cannot assume that the retarded child can, without special help, organize percepts into concepts. We cannot even assume that the retarded child perceives experiences in a fully "normal" way.

Mental retardation, by definition, implies that intellectual growth is at a slower rate than normal. Current research indicates, as suggested above, that the learning processes of the retarded child differ qualitatively as well as quantitatively from the normal. Research findings indicate that the teacher of the mentally retarded needs special preparation that will lead to an understanding of these differences and the ability to utilize their educational, psychological and sociological implications in their teaching. This assumption is basic to the listing of those specific competencies required by the teacher of the mentally retarded which differ in degree and/or kind from those required of other teachers.

Certain *personal and professional qualifications* are required for teaching mentally retarded children in school, interpreting them to parents and the community, and helping them to find their place in a society that does not always understand and accept them. While it is obvious that these teachers need the qualities desired in all teachers, there are other qualifications in which they differ. This report attempts to point up the special qualifications that apply to teachers of these children.

Certain personal characteristics seem to be essential to the teacher of the mentally retarded, irrespective of the class setting, the chronological or mental

age of the children, or the curriculum to be followed. He should be genuinely interested in the mentally retarded. Preferably this interest should not be motivated by strong feelings derived from personal identification. He must have a high level of acceptance of the limited capacities of mentally retarded children to conform to the educational and social standards generally set by the school and the community. He must have a high degree of aptitude, ingenuity, and originality in providing and adapting materials and methods to the various levels and types of the mentally retarded. He must be intellectually curious about the learning characteristics of the mentally retarded.

There is little exact knowledge about the way in which mentally retarded learn, and there is a lack of appropriate and special methodology pertaining directly to them. However, the teacher should know the story of the pioneer efforts which were made on behalf of these children. He should know about the work of Itard, Seguin, Montessori, Decroly, and others whose experiments and techniques of teaching brought about a change of attitude toward the mentally retarded. He should have a knowledge of current literature and research dealing with mentally retarded children and their training.

The teacher should have a knowledge of associations and organizations whose purposes are to promote an understanding of the mentally retarded or to plan for their education.

Modesto Public Schools, Calif.

Curriculum begins at the beginning.

These statements on teacher qualifications have implications for teacher education. They have been included in the introduction because they are general in nature and, while they specifically apply to special teachers of the mentally retarded, they should apply to any person who is responsible for the education of mentally retarded children. The *distinctive competencies* have been grouped under four broad headings:

1. Understanding the characteristics of the mentally retarded child and his place in society.
2. Developing a functional curriculum through relating the broad personal and social needs of the mentally retarded.
3. Understanding and applying pedagogical procedures based on an understanding of the known learning characteristics of the mentally retarded.
4. Selecting, developing, and using appropriate instructional materials and equipment in teaching mentally retarded children.

Understanding the Mentally Retarded Child and His Place in Society

To understand the mentally retarded child, the teacher needs insight into the dynamic factors involved in the emergence of individual social roles.

To appreciate fully the overt behavior of the mentally retarded child and the personal difficulties he experiences in a social world, teachers of the mentally retarded should have a basic ***understanding of the normal growth processes of all children.*** A knowledge of the way in which the physical nature sets the limits for potential growth, the factors in and experiences necessary to wholesome and mature emotional development, and the growth of intellectual ability contribute to the teacher's understanding of the process. The intimate and dynamic relationship of these elements influences the personal effectiveness of an individual and should be recognized by every teacher of the mentally retarded.

In mentally retarded children, the ***effect of the physical nature*** may manifest itself in a wide variety of physical abnormalities. The various physical causes of retardation impose limits on intellectual potential which range from the low-grade, bedfast individual to the dull-normal group.

The mentally retarded child, with his physical and intellectual handicaps, often encounters difficulties in fulfilling his basic needs and thus meets with frustration. In many instances his appearance may be unattractive, his movements awkward and ungainly, causing him to be rejected by others. His limited intelligence frequently prevents him from choosing socially acceptable behavior patterns and overcoming this frustration. Unusual behavior leads to further frustration and further rejection. The greater the frustration, the more likely the development of peculiar behavior patterns and the less likely the mentally retarded child will find social acceptance.

Developing a Functional Curriculum

A functional curriculum may be defined as an organization of learning experiences to cover a certain scope and sequence, the purpose of which is to help children develop and to live enriched and meaningful lives in our democratic society. The content of this curriculum should be selected on the basis of the fundamental needs (mental, physical, social, and emotional) of the mentally retarded as individuals in society.

As has been stated before, the mental processes of the mentally retarded differ to some degree quantitatively and qualitatively from "normal" mental processes. These differences determine the scope and sequence of the curriculum. The "scope" is directly related to the "kinds" of learning experience

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Specific safety habits are stressed.

the child needs to enable him to fulfill his optimum role as a mentally retarded adult. The "sequence" must conform to the processes of concept formation in mentally retarded children.

Teachers of the mentally retarded usually have to *develop their own curriculum*. Few schools have established curriculum guides, or a body of facts and information to which all mentally retarded children should be exposed, or a sequence of learning experiences which are related to the various developmental levels of mentally retarded children.

The curriculum for the mentally retarded must provide for the child who enters special education at the primary level as well as the child who is placed after several years in regular classes. It must provide for the child who enters the special class at the beginning of the school year as well as the child who is placed sometime during the year. It must provide for the child who is spending his first year in the special class as well as the child who is enrolled for his third year in the class. It must provide for the child who is at the lower limits of educability as well as a child who is at the upper limits.

Regardless of the age of the children or the level of the classes, primary, elementary, or secondary, the teacher must have ***knowledge and skill in classroom organization and management***. A curriculum which provides for small group and individualized instruction must be organized. The teacher must be able to organize the daily program based upon the total maturity of the class and arrange the grouping relative to the chronological age, the social maturity, the mental development, the physical maturity, the emotional stability, and the educational achievement of the individuals in the class. In the organization of educational programs for the mentally retarded, grouping according to these factors has usually been considered, and various kinds of plans have evolved that resulted in some degree of homogeneity. The teacher, however, rarely has a class that is completely homogeneous, and hence must be able to organize effective learning groups within the class organization.

The teacher must be adept at establishing classroom routines. The school day must be orderly and well-planned since mentally retarded children gain security and stability from following a familiar routine. Habit training is essential, and orderly routine in the classroom is an aid in the adjustment of these children. Excursions, assembly programs, parties, and other unusual happenings may be planned and may result in enrichment in the lives of these boys and girls, but they pay the highest dividends when introduced after the usual routine has been established.

Teachers of the mentally retarded will need ***knowledge and skill in the field of practical arts and vocations*** as these areas are emphasized in the curriculum. They must recognize the need for personal, social, and vocational guidance and be able to provide it because guidance counselors are frequently not available. When the services of an experienced counselor are available, the teacher must know how to interpret the mentally retarded adolescent to him. The adolescent retardate may require considerable emotional support and

Modesto Public Schools, Calif.

Learning health habits.

approval from the teacher to negate the poor effects of previous failures in the school and the community. Provisions must be made in the curriculum to meet this need.

Understanding and Applying Appropriate Pedagogical Procedures

It has been stated that little is known about exactly how the mentally retarded learn and that there is a lack of appropriate and special methodology pertaining directly to them. However, the teacher of these children should have knowledge and skill in *applying pedagogical procedures based on an understanding of those learning characteristics of the mentally retarded* which have been generally accepted. All procedures used in teaching these children should be based on the total maturity level reached by each individual within the group. This is necessary because there is more diversification in the various levels of development—chronological, physiological, mental, emotional, and social maturity—than is usually represented in regular grade groups.

The teacher must have training in the *methods that are specific to the learning characteristics of the mentally retarded*. It has been stated in this report that the learning process for the mentally retarded seems to differ quantitatively and qualitatively from the "normal." Methods courses have probably

tended to emphasize the former and minimize the latter, perhaps because of lack of objective evidence. From their experience in the classrooms with mental retardates, the members of this committee feel that qualitative differences cannot be ignored. In the use of diagnostic instruments the "quality" of the response to a stimulus gives an indication of these differences. It is known that (without special help) many concepts of the mentally retarded are confused, distorted, and less functional than those of normal children (witness the retarded child in a "regular" classroom). If application is to be made to this difference, the teacher must have skill in methodology (as a result of knowledges and training) that explicitly points up the steps in the development of concepts.

The teacher must have skill in determining when additional "steps" need to be evolved and to fit the steps into systematic instruction. He must have knowledge and skill in the use of cues, reduced cues, and possibilities for generalizations. He must be able to evolve methods (as a result of his knowledge and training) that will enable him to test the functionality of specific concepts for the child.

Since these children lack a high level of ability to generalize and have great difficulty with abstractions, the teacher should use concrete materials and simple, direct methods of presenting lessons. They need to remain for a longer time on the concrete manipulative level and to progress gradually to more abstract learning. The use of verbal symbols begins early as the teacher encourages the pupils to talk about their experiences. Such visual symbols as words and numbers are abstractions, and only the most simple of these should be presented to retarded children in the early stages of their learning. The teacher must be able to use methods that do not require from the children a high degree of reading and interpretation of directions.

The teacher must be *skilled in methods of observation of the child* during the learning process. He should know how to record his observations effectively, how to identify the needs revealed, how to employ appropriate corrective measures, and how to evaluate the effectiveness of the procedures used.

Mentally retarded children have a slow rate of learning; the teacher must therefore *know how to allow adequate time for each phase*, developing concepts slowly, simply, and in sequential order over an extended period of time. Since mental retardates tend to have a relatively short attention span, the learning periods must not be too long and must be well motivated. Because these children often have poor retentive ability, the teacher must be skillful in furnishing meaningful repetition in a variety of situations to sustain interest.

The teacher should *know how to utilize a variety of teaching approaches* to any lesson rather than to rely upon a single technique. These children, regardless of age, must be repeatedly shown how to do things. All directions must be simple and explicit whether they pertain to a learning situation or to control of behavior. It is necessary for the teacher to use a simple vocabulary to enable them to grasp meanings and follow directions.

The teacher must be able to use methods that will allow the child to *learn as a result of exploration*. He must be able to use methods of explicit instruction for the development of those desired concepts which were fostered by the exploration. He must be able to recognize when experiences have not fostered desired concepts. He must be able to restructure situations so that the concept may be isolated for specific instruction.

The teacher must know how to make the *experiences of the children concrete and meaningful* through the use of audio-visual materials.. The children can be supplied with much that they are unable to get from the printed page. It has been demonstrated that audio-visual instruction is worthwhile in teaching the retarded child.

The teacher must be able to use *methods that are related to the interest and social behavior* of the mentally retarded. The teacher should recognize that these children can be taught most successfully through seeing, feeling, and participating. He must know how to provide for this active participation either through real or contrived experiences. He should know how to direct them in story building, role playing, and group dramatizations.

These children are easily confused by the introduction of too many requirements simultaneously. They can learn to conform when confronted by a few rules, especially if they have had a voice in formulating the rules and if they understand what they are expected to do. It is essential that the teacher be able to establish guideposts for behavior early in the school year. He must be consistent in requiring observance of the rules if the classroom management is to be effective and the pupils are to learn to assume responsibility for their own actions. The teacher must apply his knowledge of the difficulties that mentally retarded children may have in formulating social concepts as they do in developing academic concepts.

The teacher must be able to *develop methodology that provides structured situations for meeting the "life needs"* of the mental retardate. This means that the teacher, as a result of his understanding of the mentally retarded, must make some predictions on the possible social positions of these children. He must make some assumptions as to the present needs of the child (outside of school). He must evolve methodology to "fill in the gaps" that are now present. He cannot assume that the unstructured experiences outside of class fill these gaps.

The knowledges and skills required of the teacher of the mental retardate will *vary depending upon the age-group of the children concerned*. An understanding of the learning characteristics of the mentally retarded presupposes that the teacher will, as a result, employ certain special methods and adapt "regular" methods regardless of the age-group he is teaching.

The teacher must know and be able to use methods that are adaptable to the various developmental levels. The teacher of the *young retarded child* Chronological Age (C.A.) below 6, will need to understand and have skill in using good preschool methods. He should know how to provide for the

development of good physical health with special attention given to training in health habits and personal care. Mentally retarded children tend to remain socially isolated, and they are usually too immature and lacking in experience to proceed without leadership. The teacher must be able to recognize which children should remain in parallel play activities as well as those who are ready for group activity. He must know how to organize a program around play activities and how to encourage free play, since these children often lack sufficient imagination to initiate their own play.

The teacher of the *retarded child of elementary school age* (C.A. 6–12) needs to know how to provide a readiness program which may extend for a 3- to 5-year period instead of the 6- to 10-week readiness periods usual in elementary school programs. The teacher must know how to stimulate intellectual development and provide opportunities for verbal and other forms of self-expression. He should understand how to utilize stories, conversations about experiences, trips, dramatizations, games, and pictures to encourage growth in language development. The program will include intensive training in visual, auditory, and kinesthetic perception. The teacher must have skill in providing eye–hand coordination games and exercises, constructive activities, and developmental language experiences. The teacher must know how to provide such a readiness program and at the same time delay formal instruction.

Modesto Public Schools, Calif.

Developing social competence.

If these children are expected to deal with symbols too early or to understand content material beyond their maturational level, future educational disabilities may occur.

The teacher of the elementary age child must know what activities and equipment to use to help children develop motor coordination. Habit training in health, work, safety, and social relations should be a continuous program. An understanding of the need for and ways of building language and number concepts is of considerable importance. The teacher must know how to use specific methods of teaching tool subjects that have proved successful with mentally retarded children.

The teacher of the *adolescent mentally retarded* should know how to relate the activities or learning experiences to the mental retardates' needs in the major areas of living. He should know the procedures to follow to give the pupils practice in solving their everyday problems in living. He should know how to provide training that will develop habits and attitudes that contribute to successful job experience. In situations where occupational training is possible the teacher needs to know how to survey the local community for jobs at the retardates functioning levels; to classify the jobs into job areas; and be able to develop curricular experiences in and out of school which will have practical application to the present and future.

The teacher needs knowledge and skill in providing a *program of reeducation for the retarded child who has experienced failure in previous attempts* to compete with other children of higher ability. Many mentally retarded children are placed in special education programs during the school year or after several years in the regular grades. Children who have tried and failed in school need a different approach from those who are inexperienced in school. The former require procedures adapted to their present attitudes and to their disabilities. The latter can profit from readiness programs established especially for the beginner who is mentally retarded. The teacher must be prepared to work with both groups.

The teacher must know how to ascertain the child's attitude toward a subject in which he has failed, how to judge his present readiness for the subject, both mentally and emotionally, as well as be able to find the most effective way of teaching him. The teacher must be able to administer tests that measure the child's level of achievement or readiness or that indicate ways in which he may learn best, and to evaluate and utilize the results. He must be able to help the child establish new goals.

Most remedial instruction has been developed for individuals with normal intelligence, but some clinical procedures have been established for the mentally retarded and reported in enough detail for other educators to use them. Teachers should have professional preparation in order to apply the clinical teaching and remedial procedures that are presently available.

The teacher must have a *knowledge of developmental speech* and be able to recognize speech disabilities as differentiated from retarded speech develop-

ment. He should know how to develop language with retarded children. He should have the ability to recognize the speech disorders which should be referred to a speech therapist.

The teacher should have skill in providing training in *oral and written language development* for the mentally retarded. Language development in the early years is an integral part of the readiness program. Acceptable language and the ability to communicate effectively with others must be developed and emphasized throughout the school life of mentally retarded boys and girls.

It is essential that the teacher *know how to establish a mental health program*. He must know how to reestablish a feeling of security and must be aware of the hazards to the mental health of the mentally retarded child. Some of these hazards are failure, rejection or overprotection by parents, rejection by peers or community, and insecurity resulting from the child's fear that he cannot succeed. The teacher must know methods of redirecting these children, how to provide for success, and how to help them establish new individual goals. He must have insight in dealing with personality development, recognize behavior as symptomatic, and look beneath the surface for the causative factors. He must have skill in counseling mental retardates.

Some children have more than one handicap which necessitates special educational provisions. They are usually placed in a class where they can benefit most from the special service in relation to their major handicap. The teacher of the mentally retarded should know the educational provisions to make for children who are mentally retarded and also have some other handicap.

Selecting, Developing, and Using Appropriate Instructional Materials and Equipment

As has been stated before, there are few special types of materials or equipment designed exclusively for the education of the mentally retarded. This does not mean that there is no need for special materials. Publishing houses are reluctant to print materials which have a limited circulation. In addition, they often lack staff members who understand the specific nature of materials required. The implications of these facts are that teachers of the mentally retarded must have *specific skills in developing materials* appropriate to the immediate problem and to the organized curriculum, and in using all of them in such a way as to meet the individual and group needs effectively.

The teacher must therefore have a knowledge of the *sources of materials and equipment*. Most special teachers have to depend upon their own resources for examining free materials, adaptable audio-visual aids, and descriptions of equipment. A program cannot be built on "scraps." All teachers should be able to demonstrate resourcefulness in the use of waste materials. This skill is valuable to the special teacher inasmuch as the use of "waste materials" offers an opportunity to stress economy and resourcefulness to the students.

The teacher must be able to *develop and adapt materials that are related to*

the learning characteristics of mentally retarded children. It is not enough for him to provide more of the same kind of materials at a particular grade level. Mentally retarded children need to have the "steps" in the development of a specific concept "spelled out." A teacher must have the ability to develop the materials following the principles of how mentally retarded children learn.

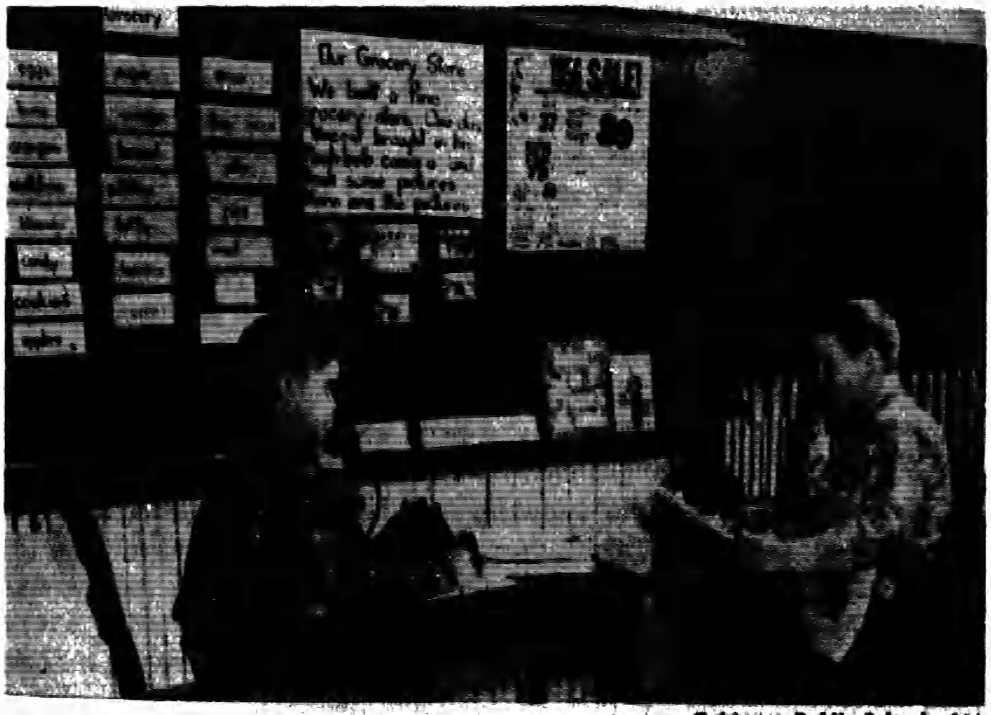
It is not enough to say that the teacher should be able to develop and adapt materials for the various achievement levels. Such *materials must be appropriate to the developmental level of the child*. They must be related to his present need, but they must also be related to his past and future experiences with other materials. They must be related to the child's development of various concepts. In preparing and adapting materials the teacher should be guided by the possibility of the child's making functional use of them. These "new" materials should be appropriate to the child's mental, social, and physical level, which means that in the preparation of materials the teacher will be guided by his understanding of the various developmental patterns of the mentally retarded. He will prepare materials to build and strengthen "selected" concepts in keeping with the "planned" curriculum. He will adapt and develop materials in keeping with his knowledge of the methods that are most successful with mentally retarded children. To do this he must have training that should lead to skills in the use of developmental materials, whether they are concrete objects or verbal symbols.

Materials and equipment must be *related to the curriculum organization and room organization*. As has been stated before, these children lack creativity and ability to generalize. They require structured situations wherein preconceived outcomes are sought. The teacher must be able to plan materials so that the pattern becomes evident and familiar to the pupils. When children are working with familiar materials or following a planned pattern the teacher can have several groups and individuals "working" at the same time. He must know how to provide a room organization, from the standpoint of location of materials and equipment, that facilitates rather than hinders the achievement of the objectives of the program.

The teacher must know how to *develop and adapt materials in relation to the interests* of the mentally retarded children. Again, this means not only that the teacher must find materials commensurate with interest of children at a certain level of achievement or social maturity, but also that the teacher must recognize the various social, mental, and academic developmental levels demonstrated by a group of mentally retarded children and by each child. Interest, attention, and progress are so interrelated that the "performance" and interests of the mentally retarded are better guides for selection of materials than "normative" guides that do not consider the problem of mental retardation.

Mentally retarded children typically have *little creative ability, yet they have a need to express themselves*. The materials must provide an experiential background from which the children can draw in this self-expression. The teachers must know how to adapt and develop materials that provide op-

portunites for learning through exploration. They must also know how to provide materials that lead to the development of preconceived concepts. Teachers at the primary level must know what materials are appropriate to a child with poor coordination who lacks concepts of color, shape, and form. As the



Baltimore Public Schools, Md.

Developing communication skills.

child's motor control improves, and his knowledge of form, shape, and color increases, teachers will need to know appropriate materials (or how to adapt materials used formerly) which will help him develop skills in cooperating on projects and in expressing himself through the various media.

The teacher must know how to *relate materials to the life needs* of the mentally retarded. This presupposes that he has some insight into the possible social positions that the mentally retarded may enjoy as adults. The teacher would be less than realistic if he supplied children with materials simply because they can "do" or "use" them. It is possible to be realistic without being fatalistic. To this end, the teacher must know how to select, provide; and adapt materials which are more than "busy work."

As the pupil reaches adolescence the teacher must provide for the *strengthening and development of prevocational, vocational, and avocational skills and knowledge.* An employment blank should not be the first experience that a mentally retarded child has with material requiring him to give information about himself. The teacher working with pupils at this age level must know how to select room equipment that is in keeping with the vocational and social possibilities for the retarded in their local community.

An analysis in outline form of these competencies follows.

Outline of Competencies

	Item number[1]
Understanding the characteristics of the mentally retarded child and his place in society	1
The teacher needs to have an understanding of intellectual, emotional, and physical development.	1.1
He must recognize that the social role emerges from the dynamic interplay of the above mentioned factors with the environment.	1.2
He must have a knowledge of the effect of deficit in the developmental process on social roles.	1.3
He must have an understanding of the concepts of mental retardation; Specifically, he should know about:	1.4
The sociological, psychological, and typological definitions of mental retardation.	1.41
The etiological factors.	1.42
He must have an understanding of the sociological implications of mental retardation for the home, school, institution, and community. Specifically, he should have:	1.5
An understanding of provisions for care and treatment in home and institution.	1.51
A knowledge of agencies and their functioning.	1.52
A knowledge of legal provisions governing agencies.	1.53
The ability to interpret services.	1.54
He needs to acquire certain additional knowledge, skills, and techniques that may aid him in modifying the role of the retarded child; he should have the competence which enables him:	1.6
To interpret psychological reports and make application to the educational program.	1.61
To prepare records and reports on behavior and progress of the mentally retarded child.	1.62
To select, administer, and interpret appropriate group tests.	1.63
To communicate understandably with parents of mentally retarded children.	1.64
To collect, summarize, evaluate, and interpret facts concerning cultural patterns of mentally retarded children.	1.65
To discover areas in which these children have lacked certain experiences in living.	1.66
Developing a functional curriculum based on broad personal and social needs of the mentally retarded	2
The teacher must have a knowledge of the curricular patterns that are best adapted to the needs of the mentally retarded (e.g., core, activity, experience, and areas).	2.1
He must have knowledge and skill in the development of curriculums for various levels of maturity. Specifically he should:	2.2
Have an understanding of curriculum development at the primary level as well as the secondary level.	2.21
Have the ability to build a curriculum that conforms to the various developmental patterns of mental retardation.	2.22

[1] The item numbers are provided for the convenience of discussion groups.

	Item number[1]
Be able to build a curriculum that provides for the sequential development of concepts and skills.	2.23
Be able to develop a curriculum that provides for the accomplishment of certain group goals regardless of the different levels of academic achievement within the group, by different "means."	2.24
The teacher must know how to develop or organize a curriculum that provides time for the use of remedial methods adapted to individual and group instruction of the mentally retarded.	2.3
The teacher must have an understanding of the development and use of criteria for the selection of content of the curriculums. Specifically he must:	2.4
Be able to relate curriculum content to the developmental level of the child; he should	2.41
Be able to make formal and informal assessments of the child's ability and achievement.	2.411
Know how to make formal and informal judgments of the difficulty of material and concepts.	2.412
Know how to use educational diagnostic instruments as means to determining curriculum content for each individual.	2.413
Be able to relate curriculum content to the learning processes of the mentally retarded. He should be able to select content:	2.42
That provides for the specificity of steps in the learning process of each child.	2.421
That provides for simplified concepts.	2.422
That fosters the development of concepts from the concrete to the semi-abstract to the abstract.	2.423
That has immediate functional importance.	2.424
Be able to relate curriculum content to the interests of mentally retarded children.	2.43
Be able to relate curriculum content to "life" needs of the mentally retarded: he must	2.44
Be able to relate content to realistic vocational goals for the mentally retarded. Specifically he should:	2.45
Be able to select curriculum content that is related to what is known of vocational possibilities for mentally retarded adults.	2.451
Know how and where to get the information that will enable him to make this selection. (Published research, self-initiated occupational surveys, etc.).	2.452
Be able to select content that will lead to the development of the social and prevocational skills that satisfy the vocational requirements.	2.453
Be able to select content that is related to the social position of the adult mentally retarded. He must be able:	2.46
To select content that provides for the sequential development of the social skills and attitudes that will enable the mentally retarded to fulfill or exceed this position.	2.461
To recognize that the mentally retarded have the same difficulty in the formation of these concepts that he has with other concepts.	2.462

[1] The item numbers are provided for the convenience of discussion groups.

	Item number[1]
The teacher must have knowledge and skill in the organization of the content of the curriculum.	2.5
He must be able to arrange for a sequential development of concepts and skills.	2.51
He must be able to organize a curriculum which provides for repetition of basic concepts.	2.52
He must be able to organize a curriculum that provides for "in" and "out" of school experiences (school and community resources, recreation centers, work experiences, field trips).	2.53
He must be able to organize a curriculum that provides for integration in a total school program.	2.54
Understanding and applying appropriate pedagogical procedures based on an understanding of the known learning characteristics of the mentally retarded	3.0
The teacher needs a knowledge of general pedagogical guides based on an understanding of mental retardation. Specifically he should:	3.1
Be able to use methods that are adapted to the slow rate of progress of the mental retarded.	3.11
Be able to use methods that recognize a short attention span.	3.12
Be skilled in a variety of teaching approaches to a single problem.	3.13
Know how to use procedures that insure a mental health program; he must know	3.14
How to provide opportunities for successful experiences.	3.141
Techniques of counseling mentally retarded children and their parents.	3.142
Be skilled in observation.	3.15
Be skilled in aiding speech development.	3.16
Have skill in providing training in oral and written language development for the mentally retarded.	3.17
The teacher must know the accepted methods of instruction that are applicable to the developmental level of the child. Specifically he should:	3.2
Have knowledge and skill in preschool educational techniques that are applicable to mentally retarded children; He must know:	3.21
How to train the children in self-help activities.	3.211
How to provide for motor development and to deal with the specific health problems of the young mentally retarded child.	3.212
How to provide for intellectual development and opportunities for verbal and other forms of self-expression.	3.213
How to provide for sound emotional health.	3.214
How to provide socializing experiences and how to organize a program around play activities.	3.215
He needs to have knowledge and skill in elementary educational techniques. He should:	3.22
Know how to provide a readiness program for some children and a program of re-education for others.	3.221
Have skill in establishing adequate health, work, safety, and social habits.	3.222
Know how to develop knowledge and skill on an elementary	3.223

[1] The item numbers are provided for the convenience of discussion groups.

	Item number[1]
level in arithmetic and the language arts including training the mentally retardate in desirable speech habits.	
Be able to use methods that provide for the sequential development of social skills and concepts.	3.224
The teacher of the adolescent mental retardate must have knowledge and skill in techniques suitable for older retarded children. He must know how to:	3.23
Provide a program of reeducation.	3.231
Provide for adequate social and community adjustment.	3.232
Relate classroom activities to needs in major areas of living.	3.233
Give personal, social, and vocational guidance.	3.234
The teacher must be skilled in the methods that are specific to the learning characteristics of the mentally retarded. Specifically he should:	3.3
Have a good understanding of concept development; he should:	3.31
Be able to relate his knowledge to what is known of the learning characteristics of the mentally retarded.	3.311
Know how to apply this knowledge to the development and use of methods.	3.312
Know how to provide direct and purposeful experiences.	3.32
Know how to present concepts slowly, simply, and in a sequential order.	3.33
Provide adequate time for each phase of development.	3.34
Recognize and use methodology that is appropriate to the mental retardate's interest, present achievement level, and present level of maturity.	3.35
Be adept in keeping the learning experiences interesting but simple enough for the limited comprehension of the child.	3.36
Have skill in developing language ability in the child.	3.37
Have skill in the use of visual and auditory aids and in the preparation of instructional materials.	3.38
Have knowledge and skill in providing a readiness program; He must:	3.39
Know how to plan and implement an extended readiness program and delay formal instruction when necessary.	3.391
Have skill in selecting appropriate learning activities.	3.392
The teacher must have knowledge and skill in reeducating the mentally retarded child and in providing remedial instruction. Specifically he should:	3.4
Know how to determine the child's present level of achievement.	3.41
Know how to help the child establish new goals and relate them to the goals of the class.	3.42
Have skill in adjusting instructional procedures to the widely varying needs of the children in the class.	3.43
Know how to identify and select children who need remedial help.	3.44
Understand and know how to apply clinical teaching procedures that have been developed and used successfully with the mental retarded.	3.45

[1] The item numbers are provided for the convenience of discussion groups.

	Item number[1]
The teacher must have knowledge and skill in classroom organization and management. Specifically he should:	3.5
Be skilled in arranging flexible schedules and programs.	3.51
Be able to provide for individual and group instruction.	3.52
Be adept at establishing routines.	3.53
Know how to provide activities which will furnish worthwhile learning experiences.	3.54
Know how to integrate the program of the special class with the total program of the school. This implies an understanding of current trends in methodology in "regular" elementary and secondary programs.	3.55
The teacher must have knowledge and skill in providing for children with multiple handicaps.	3.6
He must know what to do for the mentally retarded child who is also visually handicapped, auditorily handicapped, or orthopedically handicapped.	3.61
Selecting, developing, and using appropriate instructional materials and equipment in teaching mentally retarded children	4
The teacher must know how to relate materials and equipment to the development level. Specifically he should:	4.1
Know how to relate materials to the physical development of the child (e.g. toys, manipulative materials, media for free expression, and hand tools). He must be able:	4.11
To relate materials to the muscular skill level of the child (large and small muscle coordination).	4.111
To relate materials to the hand-eye coordination level of the child.	4.112
Have the ability to relate materials to the mental development of the child; He must:	4.12
Know how to relate materials to the concept level of the child.	4.121
Know how to relate materials to the academic achievement level of the child.	4.122
Be able to develop materials which foster the development of functional concepts disregarding the academic level of the child.	4.123
Be able to provide materials and equipment that are related to the social development of the child.	4.13
The teacher must be able to develop, select, and use materials and equipment that are appropriate to the learning characteristics of mentally retarded children. Specifically he should be able:	4.2
To provide materials that provide opportunities for learning through exploration.	4.21
To provide structured materials that "carry" the child through the process of concept formation.	4.22
To make provision for the mentally retarded's poor ability in abstract thinking and his short attention span.	4.23
To provide materials for "explicit" instruction (he cannot assume that the child learns anything incidentally although he provides opportunity for "incidental learning").	4.24

[1] The item numbers are provided for the convenience of discussion groups.

	Item number
To develop, select, adapt, and use materials that may be used diagnostically.	4.25
The teacher must be able to develop, select, and adapt materials that are appropriate to the interests of the mentally retarded. Specifically he should be able:	4.3
To recognize the value of using the various interests of the mentally retarded.	4.31
To provide materials that awaken new interests.	4.32
To provide materials that account for differences in achievement level, mental development, chronological age, and interest level.	4.33
The teacher must be able to develop, select and adapt materials and equipment that are related to the life needs of the mentally retarded. Specifically he should be able:	4.4
To present materials that have been systematically organized in the light of what is known about mentally retarded.	4.41
To develop materials that will help the children who do not conform to what is known.	4.42
To provide materials that lead to "self-evaluation" without "self-depreciation."	4.43
To provide materials and equipment that lead to the development of vocational, avocational, social and academic skills, knowledge, and attitudes necessary for adult societal membership.	4.44
The teacher must know the sources of materials and equipment.	4.5
He should be able to select and use audio-visual equipment.	4.6
The teacher must be able to relate the materials and equipment to the organization of the curriculum and classroom. Specifically he should:	4.7
Be "selective" of the materials and equipment that become a part of the program.	4.71
Be able to select materials and equipment to provide for indidual and group instruction occurring simultaneously.	4.72
Be able to locate the materials and equipment so that the objectives of the curriculum and the present needs of the children may be fulfilled.	4.73

[1] The item numbers are provided for the convenience of discussion groups.

Summary

Our report has dealt with the specific competencies of teachers of the mentally retarded. Whenever we have agreed that all teachers need a certain skill or knowledge and we have not been able to agree that a special teacher's competency should be different in degree or kind, that item has been eliminated. The committee recognizes the paucity of educational research dealing with the learning processes of mentally retarded children. New understanding as a result of future researches will verify or negate some of the statements that have been made in this report. Until this research is provided, it is hoped that this report may be suggestive to teachers and to those who have the responsibility for teacher training and/or educational research.

(End of Committee Report)

TEACHERS' EVALUATIONS OF COMPETENCIES

As the second method of securing information on teacher competencies, a group of teachers rated for importance a list of competencies submitted to them through an inquiry form.[1] The procedure for collecting these data was as follows: The study staff, through conferences with specialists in the field of mental retardation drew up a list of types of knowledge, skills, and abilities which was submitted on a pretest basis to 25 teachers and other school leaders prior to the final preparation of the list for the inquiry form.

The names of the superior teachers of retarded children to whom the inquiry forms were sent were supplied, on a quota basis, by State departments of education. The sampling procedure was developed by the study staff and the advisory committees with the aid of the Research and Statistical Services Branch of the Office of Education.[2] The data given in the report include responses from 150 teachers selected by this method.[3]

Although the guidelines for nominations of teachers specified that the selection should be made so as to include various types of teaching situations, urban and rural, public and private, day and residential schools, it so happened that the returns included, with very few exceptions, only teachers in day schools. The number of private and residential school teachers completing the questionnaire was too small to constitute an adequate sample and therefore could not fairly be included in this report.

The returns included results from teachers working primarily with "educable" children, although a small number of children currently described as "trainable," were in their classes.[4] Similar studies including opinions from teachers in residential schools and other teachers could well be made.

These teachers were requested to view each separate competency in terms of its significance for successful teaching of mentally retarded children, and then to check whether they considered it "very important," "important," "less important," or "not important" in their present position.

The various competencies are listed in table 1 in rank order of importance as determined by the teachers' ratings.[5] They are classified in the table by groups. The first group includes 36 items rated as "very important." The second group includes 58 items rated as "important." The third group includes the six items rated as "less important." None of the 100 items on this list received an average rating of "not important" by the teachers. This, in itself, tends to validate the importance of the complete list. At the same time, there seems to be a hierarchy of importance among the items.

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[1] See appendix D for excerpts from this inquiry form.

[2] Further details on the method of selection will be found in appendix B, pages 72–74.

[3] Although the original objective was 100 teachers, so many fully completed returns were received that it was decided to include 150 teachers.

[4] The ages and I.Q.'s of the children in their classes and the type of school organization in which the teachers were working are given in appendix B, page 73.

[5] The statistical procedures are given in appendix C on page 75.

TABLE 1.—Relative Ratings of Importance (and Proficiency) Which Teachers of Mentally Retarded Children Placed on Competencies

Rank order of importance [1]	COMPETENCIES	Rank order of proficiency [1]
	Items rated "VERY IMPORTANT" [1] (1-36)	
	The ability—	
1	to recognize the individual differences of each mentally retarded pupil	2
2	to help mentally retarded pupils to develop acceptable patterns of behavior and personal hygiene	3
3	to select and use reading materials suited to both level and interest of mentally retarded pupils	6
4	to provide a flexible, individual curriculum	9
5	to interpret the behavior of mentally retarded in terms of physical, psychological, and environmental factors	22 *sd*
6	to help mentally retarded pupils develop self-sufficiency in daily living and in planning for the future	20 *sd*
7	to provide experiences for mentally retarded pupils in health education	11
8	to use a wide range of techniques, materials, and methods in teaching mentally retarded pupils to read	5
9	to remain objective, while retaining sensitivity and appreciation for the limited achievements of mentally retarded pupils	10
10	to recognize possible causes of social, educational and emotional maladjustments of individual mentally retarded pupils, and to participate in planning course of action aimed at alleviating them.	26
11	to visit the homes, gain the support of, and work cooperatively with, parents of mentally retarded pupils	8
12	to differentiate between social and emotional maladjustment and mental retardation	42 *sd*
13	to organize and develop a curriculum around socially useful and meaningful themes or units of experience	27
14	to counsel mentally retarded children on their emotional problems and personal attitudes	32
15	A knowledge or understanding of principles of learning applied to teaching the mentally retarded	12
	The ability—	
16	to teach fundamental arithmetic to mentally retarded pupils around concrete situations	7
17	to provide for a wide range of social experiences for mentally retarded pupils	35

See footnotes at end of table.

TABLE 1.—(continued)

Rank order of importance [1]	COMPETENCIES	Rank order of proficiency [2]
	Items rated "VERY IMPORTANT" (continued)	
18	to use a broad range of community resources (people, places, things) in teaching the mentally retarded	37
19	to counsel mentally retarded children in their social problems	33
20	to provide a wide range of experiences in community living for mentally retarded pupils	52 *sd*
21	A knowledge or understanding of the role of the school in helping pupils reach maturity physically, socially, and emotionally, as well as intellectually	39
	The ability—	
22	to provide frequent opportunity for group participation	4
23	to interpret special educational programs for the mentally retarded and the problems and potentialities of these children to regular school personnel	16
24	to analyze the factors which have contributed from infancy to the language development of each mentally retarded pupil, to evaluate continuously his level of development, and to provide appropriate learning experiences at this level	58 *sd*
25	to recognize and use "out-of-school" situations and materials whenever possible in one's teaching	21
26	A knowledge or understanding of the intellectual characteristics of mentally retarded children	18
	The ability—	
27	to develop and use cumulative educational records on individual mentally retarded pupils	13
28	to make educational interpretations from case records and histories	15
29	to encourage and create situations in school in which the mentally retarded and so-called normal children work and/or play together	38
30	to make educational interpretations from psychological reports	51
31	to interpret special educational programs for the mentally retarded and the problems and potentialities of these children to the general public	31
32	A knowledge or understanding of possible effect of the socio-economic and cultural milieu and emotional climate of the home on the mentally retarded child's social, emotional, and intellectual development	43
	The ability—	
33	to win the trust and approval of so-called normal children as well as mentally retarded pupils	1 *sd*

See footnotes at end of table.

TABLE 1.—(continued)

Rank order of importance [1]	COMPETENCIES	Rank order of proficiency [2]
	Items rated "VERY IMPORTANT" (continued)	
34	to provide experiences for mentally retarded pupils in physical education	30
35	to cooperate with special teachers and other school personnel in developing an integrated program for each mentally retarded pupil	25
36	to teach a group of mentally retarded having wide chronological and mental age ranges	23
	Items rated "IMPORTANT" (37-94)	
37	A knowledge or understanding of the difference between the rate of physical and mental growth in mentally retarded children and its educational implications	29
38	The ability to fit the special program for the mentally retarded pupils into the total school program	53
39	A knowledge or understanding of sources of procurement and methods of using special educational materials, audio-visual aids, and other devices for increasing teaching efficiency and appeal	40
40	The ability to see the value of and to use toys and games (e.g. educational toys for learning experiences)	17 *sd*
41	A knowledge or understanding of methods and/or techniques of teaching the socially and emotionally disturbed	56
	The ability—	
42	to work with other members of a professional team in helping parents solve problems related to their child's social and emotional problems	49
43	to help parents get information which will assist them in facing the problems arising from having a mentally retarded child in the family	54
44	to differentiate between speech defects attributable to mental retardation, and those attributable to physical and emotional causes	82 *sd*
45	to counsel mentally retarded children on their educational problems	19 *sd*
46	to provide experiences for mentally-retarded pupils in domestic arts	74 *sd*
47	to make educational interpretations from medical (including psychiatric) reports	77 *sd*
48	to operate amplifiers, record players, filmstrip projectors, and other audio-visual aids	57

See footnotes at end of table.

TABLE 1.—(continued)

Rank order of importance [1]	COMPETENCIES	Rank order of proficiency [2]
	Items rated "IMPORTANT" (continued)	
49	to organize and carry out field trips for mentally retarded pupils	44
50	to work with other members of a professional team in helping parents solve problems related to their child's limitations and potentialities	47
51	A knowledge or understanding of the basic physical and psychological needs of man	50
	The ability—	
52	to work as a member of a team with other professional workers (such as psychological and social welfare personnel) in making a case study of a mentally retarded child aimed at planning a program suited to his needs and potentialities	28
53	to counsel mentally retarded children on their vocational problems and life goals	65
54	to promote occupational competency for mentally retarded pupils through efficient vocational guidance	84 *sd*
55	A knowledge or understanding of reference materials and professional literature on the education and psychology of the mentally retarded	45
	The ability—	
56	to make educational interpretations from reports of social workers	41
57	to teach mentally retarded pupils to spell the words they need by using a variety of methods	14 *sd*
58	to provide experiences for mentally retarded pupils in industrial arts	81 *sd*
59	to provide experiences for mentally retarded pupils in arts and crafts	46
60	in music	64
	A knowledge or understanding of—	
61	evidence for and against effects of environment and training on the growth and development of mentally retarded children	34 *sd*
62	the relationship of mental deficiency to delinquency, crime, and pauperism	59
63	provisions for mentally retarded children under existing Federal, State, and local laws and regulations pertaining to education	61
64	the education and psychology of all exceptional children	69
65	the present status of causes of mental retardation	63

See footnotes at end of table.

TABLE 1.—(continued)

Rank order of importance [1]	COMPETENCIES	Rank order of proficiency [2]
	Items rated "IMPORTANT" (continued)	
66	The ability to provide experiences for mentally retarded pupils in fine arts	60
	A knowledge or understanding of—	
67	sources of, and services offered by, nonschool organizations, such as clinics, courts, clubs, churches, welfare agencies, and rehabilitation agencies for mentally retarded children and their parents	73
68	the physical and psychological abnormalities attributed to brain injury	85 *sd*
69	A knowledge or understanding of teaching methods devised for the mentally retarded	76
70	The ability to interpret special educational programs for the mentally retarded, and the problems and potentialities of these children, to related professional personnel, such as doctors and social workers	48 *sd*
71	A knowledge or understanding of the distinctive curriculums of preschool, primary, intermediate, secondary, and post-school-education programs for the mentally retarded	62
	The ability—	
72	to interpret special educational programs for the mentally retarded, and the problems and potentialities of these children, to nonprofessional school workers such as bus attendants and school custodians	36 *sd*
73	to work with other members of a professional team in helping parents with problems related to their child's occupational placement	80
74	to provide experiences for mentally retarded pupils in dramatic arts	70
75	A knowledge or understanding of provisions for mentally retarded children under existing Federal, State, and local laws and regulations pertaining to vocational training of mentally retarded youths and adults	94 *sd*
	A knowledge or understanding of—	
76	the purposes, services, and locations of national organizations concerned with the education and general welfare of the mentally retarded, such as the International Council for Exceptional Children, American Association on Mental Deficiency, the National Association for Retarded Children	67
77	the clinical types of mentally deficient	68
78	the present status of medical treatment of mental deficiency	89 *sd*

See footnotes at end of table.

TABLE 1.—(continued)

Rank order of importance [1]	COMPETENCIES	Rank order of proficiency [2]
	Items rated "IMPORTANT" (continued)	
79	the findings of research studies which have bearing on the education, psychological, and social status of mentally retarded children	78
80	provisions for mentally retarded children under existing Federal, State, and local laws and regulations pertaining to employment practices	90 *sd*
	The ability—	
81	to administer to mentally retarded children individual diagnostic tests of arithmetic and reading disability	55 *sd*
82	to give speech correction to mentally retarded with only occasional help of a correctionist	92 *sd*
83	to work with architects and school administrators in planning and securing classroom and other special equipment for mentally retarded pupils	86
84	A knowledge or understanding of provisions for mentally retarded children under existing Federal, State, and local laws and regulations pertaining to juvenile delinquency and probation	87
85	The ability to give speech correction to mentally retarded under direction of a correctionist	79
	A knowledge or understanding of—	
86	methods and/or techniques of teaching the speech handicapped	93 *sd*
87	the evidence for and against inheritance of mental deficiency	66 *sd*
88	the arguments and studies for and against segregation of mentally retarded pupils in special classes	72 *sd*
	The ability—	
89	to teach mentally retarded having multiple handicaps, i.e., cerebral palsy, hearing or vision loss	95 *sd*
	to administer to mentally retarded children—	
90	standardized group achievement tests	24 *sd*
91	group interest and special aptitude tests and tests of social and emotional adjustment	88
92	to take responsibility for, or to assist with, one or more extracurricular activities for mentally retarded, such as Scouts, and hobby clubs	83 *sd*
93	A knowledge or understanding of the history of education of the mentally retarded	75 *sd*
94	The ability to apply the Strauss technique	99 *sd*
	Items rated "LESS IMPORTANT" (95–100)	
	The ability—	
	to administer to mentally retarded children—	

See footnotes at end of table.

TABLE 1.—(continued)

Rank order of importance [1]	COMPETENCIES	Rank order of proficiency [2]
	Items rated "LESS IMPORTANT" (continued)	
95	social maturity scales	96
96	individual verbal and performance tests of mental ability	91
97	to administer an educational program for mentally retarded pupils	98
	to administer to mentally retarded children—	
98	sociometric tests	97
99	group intelligence tests	71 *sd*
100	projective tests	100
	Items rated "NOT IMPORTANT"—NONE	

[1] The rank order of the items was arrived at by averaging the importance ratings made by the teachers. The rank of each item was determined by the average rating it received. See appendix C, page 75, for further explanation of statistical procedures employed.

[2] When the inquiry form was sent to the teachers of mentally retarded, they were also requested to rate their own proficiency in each of the items. The rank order of proficiency is based on an average of these ratings for each item. On the average, teachers rated themselves "good" in competencies indicated by proficiency rank order numbers 1 to 61; "fair" on numbers 62 to 99; and "not prepared" on number 100. A discussion of the proficiency of the teachers will be found on page 42. See appendix C, page 76 for further explanation of statistical procedures employed.

[3] Items were classified into the 4 groups of importance according to their average ratings: "very important"; "important"; "less important"; and "not important."

[4] *sd*—denotes "significant difference." For all items marked with this symbol, analysis showed a statistically significant difference between the average rating of importance and the average rating of proficiency. A discussion of these differences may be found on page 43. See appendix C, page 77, for statistical procedures employed to determine significant difference.

TEACHER EVALUATIONS OF COMPETENCIES: AN ANALYSIS

While the original list of competencies appearing on the teachers' inquiry form was not organized systematically by topic, certain natural groupings of items can be made which may facilitate discussion of the results. For the sake of convenience, therefore, the discussion is organized, insofar as possible, around the four principal categories defined in the "Competency Committee" report. These were: (1) Understanding the mentally retarded child, (2) developing a functional curriculum, (3) understanding and apply good teaching methods, and (4) selecting, developing, and using appropriate instructional materials. Some competencies in the teachers' list did not fall satisfactorily within these four groupings and therefore require separate consideration. They are grouped around the following headings: (5) General orientation in special education, (6) interpersonal relationships, and (7) administrative and legal information. In all cases an effort has been made to present

a relevant and unbiased interpretation of the findings. In the discussion which follows, the numbers in brackets refer to the rank order of importance in table 1.

Understanding the Mentally Retarded Child

A number of the items in the inquiry form dealt with the teachers' competence in the broad general field of mental retardation. *Knowledge of the intellectual, social, and emotional characteristics* of the mentally retarded child ranked very high in the teachers' ratings, generally, except for some of the more technical or theoretical skills which they seemed to consider as lying outside the basic preparation of the teacher. Such competencies as ability to recognize individual differences in pupils [1], knowledge of their intellectual characteristics [26], and the ability to differentiate between social and emotional maladjustment and mental retardation [12] ranked high. More technical questions, such as knowledge and understanding of the basic physical and psychological needs of man [51], and understanding differences between rates of physical and mental growth [37] ranked lower.

High rank was given to questions dealing with *behavior and emotional development*. For example, the ability to recognize possible causes of social, educational, and emotional maladjustments and to participate in planning to alleviate them ranked *tenth*. The ability to help mentally retarded pupils develop acceptable patterns of behavior and personal hygiene ranked *second*.

In their evaluations, the teachers gave a very high rank to the "clinical" attitude, the ability to remain objective while retaining sensitivity to and appreciation for the problems of the mentally retarded [9].

A general knowledge of the *effects* of environment on social, emotional, and intellectual development of the mentally retarded was rated high [32], but the more technical abstract question of evidence for and against effects of environment was rated lower [61]. Similarly, the relationship of mental retardation to delinquency, crime, and pauperism received a low rank [62].

Several questions dealt with the ability to *make educational interpretations* from different types of child study data. On this point the evaluations differed, largely on the basis of the technical complexity of the task. Thus the ability to interpret the behavior of the mentally retarded in terms of physical, psychological, and environmental factors was rated very high [5]. The general ability to make educational interpretations from case histories [28] and the ability to make interpretations from psychological reports [30] were considered less important. The ability to make educational interpretations from medical and social work reports was rated much lower [47 and 56 respectively]. This is another illustration of "hierarchy" in the ratings.

Background knowledge of the more technical aspects of the *causes of mental retardation* tended to be rated relatively low, including the items: Knowledge of the present status of causes of mental deficiency [65], the physical and psychological abnormalities attributable to brain injury [68], and the evidence

for and against inheritance of mental deficiency [87]. Knowledge of the *medical aspects of mental deficiency* was also rated low, including such competencies as knowledge of the clinical types of mentally deficient [77] and the present status of medical treatment of the condition [78].

Matters of *professional reading more or less at the research level*—such items as knowledge of reference materials and professional literature [55], of findings of research studies on the educational, psychological, and social status of the retarded [79], and knowledge of the history of education of the retarded [93]—generally ranked low. This whole series illustrates the teachers' emphasis on the practical and applied aspects of the job.

The *ability to administer* various types of *standard tests rated uniformly low* in the teachers' responses. Of these the one rating highest was the ability to administer diagnostic tests of arithmetic and reading disability [81], and even it was very low. The others rated even lower: Ability to administer standardized group achievement tests [90], group interest and aptitude tests and tests of social and emotional adjustment [91], social maturity scales [95], individual tests of mental ability [96], sociometric tests [98], group intelligence tests [99], and projective tests [100]. While no data are available in this study to explain this attitude of the teachers, it is probable either that the testing function had been assigned to other personnel in the systems in which they worked or that they thought it should be so assigned. It should be

Milwaukee Public Schools, Wis.

Concrete teaching of practical experiences.

Milwaukee Public Schools, Wis.

Personal grooming is important.

remembered here that the questions asked for "ability to administer" rather than "knowledge about"; in fact, the educational interpretation of such reports was rated high.

Curriculum

A large number of items dealt with *curriculum*. As might be expected, the teachers tended to rank them high in importance. Perhaps the most helpful analysis under this category comes from arranging the various groups of experiences in the order of importance in which they were ranked by the teachers.

Highest value was given to selecting and using reading materials suited to level and interest of pupils [3], using a wide range of materials and methods in teaching reading [8], developing self-sufficiency [6], providing health education experiences [7], teaching of arithmetic [16], providing community living experiences [20], and providing learning experiences in language [24].

The ability to cooperate with special teachers and with other school personnel in developing an integrated program for the retarded also fell within the "very important" group [35], as did the ability to provide for physical education experiences [34]. The ability to organize instruction so as to pro-

vide frequent opportunity for group participation [22], for a wide range of social experiences [17], and for social situations in which the normal and retarded work together [29] are instances of the high ranking given socializing experiences in the curriculum.

Competencies dealing with curriculum that seem to stand out as "very important" are in the group of experiences commonly classified as *core curriculum, organized on the unit plan* around socially useful and meaningful themes [13].

Knowledge of curriculum for the whole age range of the retarded, preschool, primary, elementary, secondary, and post-school programs however, fell much farther down the list in the rating [71]. Perhaps the teachers felt this was in the supervisory rather than in the teaching area, or that it was not possible to be competent over the whole range.

Some other aspects of curriculum fell into the "important" group only; these were domestic arts [46], spelling the words these children need [57], industrial arts [58], and arts and crafts [59]. Expressive activities through music [60], fine arts [66], and dramatic arts [74], ranked the lowest in this group. Ability to take responsibility for or assist in extracurricular activities ranked comparatively low [92].

On the whole, therefore, the ability to teach *practical arts and expressive and recreational activities ranked below the more academic activities* in the judgment of the teachers. This is in contrast to the emphasis that was given these activities in the early stages of teaching the retarded. It may be that these subjects are sometimes taught by specialists other than the teacher of the retarded.

Methods and Materials

The number of competencies in the inquiry form which can be treated as methods apart from curriculum was rather small. These tended to deal with fairly specialized techniques. Specialized methods such as the game approach [40] and use of audio-visual aids [48] ranked in the middle of the distribution. A method as specialized as the Strauss technique was ranked in the "less important" classification [94].

There were few items on materials of instruction in the inquiry form. Knowledge of sources of procurement and methods of using special educational materials ranked high [39]. Many competencies dealing with procurement of materials appeared in combination with other questions; such items as ability to provide materials for reading and ability to use a wide range of materials in reading [3 and 8 respectively] ranked high.

As a matter of classroom management the keeping of good cumulative records was rated as quite important [27]. Apparently the teachers considered the provision of materials of instruction and keeping records as integral and important parts of their job.

General Orientation in Special Education

A number of competencies in the inquiry form dealt with background knowledge in various *aspects of special education outside the field of mental retardation*. As a whole those *in the broader aspects of special education* aside from mental retardation *rated very low*. While it should be pointed out that these items were considered not so much unimportant as less imporant in a small and highly competitive list of competencies, the frequency with which teachers of the retarded meet handicaps other than retardation in the classroom may well raise questions on this attitude of the teachers. Increasing interest in the complex disabilities of the more severely retarded child and the constant improvement in diagnostic facilities may also cause reconsideration of this problem.

One item dealing with this subject directly—"a knowledge and understanding of the education and psychology of all exceptional children"—was rated rather low [64]. A knowledge or understanding of methods of teaching the socially and emotionally disturbed was somewhat more highly valued [41]. The ability to teach mentally retarded having multiple handicaps was rated low [89].

The competencies dealing with speech problems of the mentally retarded were, with one exception, also rated relatively low. The one the teachers valued most was the ability to differentiate between speech defects attributable to mental retardation and those attributable to physical and emotional causes [44]. Other competencies, such as the ability to give speech correction to the mentally retarded with only occasional help of a correctionist [82], or under the direction of a correctionist [85], and knowledge or understanding of methods of teaching the speech handicapped [86] were all rated low. In view of the frequency of speech defects in the mentally retarded, these findings may deserve further study.

Interpersonal Relationships

A rather large number of competencies in the inquiry forms dealt with questions which may be grouped under the general head of interpersonal relationships. These items are concerned more or less with certain functions such as counseling, interpreting special education to persons outside the field, and teamwork with allied agencies.

The teacher's own ability in *counseling and guiding the child in his personal adjustment* was, as a whole, given high rank in the ratings. The rank varied somewhat according to the degree of remoteness from the classroom and the degree of specialization required. Thus, visiting the homes of the children and gaining the cooperation of the parents rated very high [11]. Counseling retarded children on their emotional problems and personal attitudes [14] and social problems [19] ranked high.

Helping parents get information which would assist them in facing the

problems arising from having a retarded child in the family [43], and counseling mentally retarded children on their vocational problems and life goals [53 and 54] ranked near the middle of the distribution.

Problems of *interpreting special education* to groups outside the specialty produced a wide range of importance ratings by the teachers. Interpreting special educational programs to regular school personnel [23], and to the general public [31] ranked among the upper third of the items. Interpreting the special education program to related professional personnel outside the school and to nonprofessional workers in the school organization was considerably lower [70 and 72 respectively]. In other words, the teachers seemed to feel their main responsibility in interpreting the program lay with school personnel and the general public.

Ability to participate as a member of a team *with allied agencies* ranked near the middle or lower half of the distribution. Cooperation in work with other members of a professional team in helping parents with their child's social and emotional problems and in understanding their child's limitations and potentialities ranked [42] and [50] respectively. Rated still lower down the list were the items: helping as a team member on problems of vocational placement of the children [73] and knowledge of services of national professional organizations interested in the retarded child [76]. Apparently teachers accepted as their principal teamwork responsibility cooperation with others in solving problems of social and emotional adjustment of a child and his family.

Administrative and Legal

To matters of *administration*, beyond the ability to fit the special program into a total school program [38], the teachers assigned relatively little importance. This is in spite of the fact that in many school systems the teachers of the retarded must assume the burden of much of the leadership in program development. Knowledge of arguments for and against separation into special classes [88], the ability to work with school administrators and such persons as architects in planning classroom facilities [83] and administration of a program for the mentally retarded [97] all ranked low.

Similarly, matters dealing with the *legal status of the retarded* were considered of lower importance. For example, knowledge of provisions for the retarded under existing laws regulating education [63], vocational training [75], employment practices [80], and juvenile delinquency [84] were all rated low.

The Most Important Competencies

An examination of the *most important competencies* reveals an extremely interesting picture of the main outlines of the job today, as seen through the eyes of the teachers.

- These teachers gave high priority to recognizing the child as an individual

[1], and to skill in individualizing the curriculum to meet his needs [4].

- They rated understanding the child very highly, especially along lines of social and emotional adjustment [12], and being able to help him develop acceptable patterns of behavior [2]. They emphasized an understanding of causes of maladjustment [10], and the need for counseling with the child [19], and his family [11].
- They implied that the teacher's attitude should be one which combines objectivity with sympathetic understanding of the retarded pupil's problems and limitations [9].
- They emphasized the necessity of developing practical self-sufficiency in the child [6].
- They were especially interested in health education [7].
- They were interested in the child's academic progress, especially in reading [3 and 8], and arithmetic [16]—the fundamentals of "literacy." The academic curriculum received more stress than its traditional twin, industrial arts and homemaking [58], [46]. This may be due to various factors: many of the teachers had been "regular" teachers; there are incessant pressures on them to emphasize academic skills. In the education of the mentally retarded there may also be a genuine drift away from traditional emphasis on "practical" handwork and domestic arts experiences.
- Successful teachers of the mentally retarded showed a good deal of interest too, in preparing these children for participation in community life [18], [20], including a broad range of social experiences [17]. This is due in part, no doubt, to their being teachers of educable children in regular public schools. Nevertheless, the emphasis on giving them community-type experiences is significant.
- A great deal of interest was evidenced in the organization of curriculum around meaningful and socially useful experiences [13], a trend which is closely in line with general education.
- In general, and in situations where the number of competencies in a category permitted it, the teachers tended to rank the practical and immediate aspects higher than the theoretical and remote. This tendency is illustrated frequently; an example is the series on behavior and emotional development, page 31.
- In some instances a hierarchy developed in the ratings on the basis of the degree to which technical preparation in other fields would seem to be an essential element in the competence. An illustration of this may be found in the series on making educational interpretations from various types of child study data (page 31). The teachers apparently favored delimiting their jobs to workable size, in which teaching is the central core. Although they expressed a high degree of willingness to cooperate on joint problems with other professions, they seemed to think that there was a limit beyond which they did not wish to take primary responsibility.

Effect of Recency of Preparation on Evaluation of Competencies

How did the recency of preparation of the 150 superior teachers affect their ratings of relative importance of the list of competencies? Seventy-five of these teachers had the major part of their initial specialized training *prior* to January 1, 1946, and 75 *since* that date. A comparison of ratings of the importance of competencies by these two groups yielded only 3 competencies on which there was a statistically significant difference between the two groups in the ratings given.[6] These are shown in the following tabulation:

Items which showed SIGNIFICANT DIFFERENCE between PRIOR-SINCE ratings of IMPORTANCE

Item number table 1	Competencies	Group rating higher
39	A knowledge or understanding of sources of procurement and methods of using special educational materials, audio-visual aids, and other devices for increasing teaching efficiency and appeal (P, 40) [1]	Since
49	The ability to organize and carry out field trips for mentally retarded pupils (P, 44)	Since
62	A knowledge or understanding of the relationship of mental deficiency to delinquency, crime, and pauperism (P, 59)	Prior

[1] (P) denotes rank order of proficiency, see table 1, page 24

There were no significant differences on the basis of recency of training in the remaining 97 items. In general, it must be concluded that few differences exist between the views of these two groups. The reasons for these results are not immediately discernible. It may be that attending inservice workships, reading professional journals, and other community activities have given both groups of educators a common frame of reference.

COMMITTEE REPORT AND TEACHER EVALUATIONS

The general plan adopted for this study was to derive two sets of competencies by independent methods. This was done because it was thought that more significant results would be achieved if the competency committee and the specialists preparing the list for the teachers to evaluate worked independently. In an exploratory study this method undoubtedly had advantages. Substantial overlapping was expected. It was thought, however, that this overlapping would in itself be a partial validation of the lists and that, to the degree

[6] The method of calculation of these differences is described in appendix C, page 79.

Baltimore Public Schools, Md.

"Do it yourself."

that the two lists failed to overlap, they could be considered as supplementary, each to the other.

This procedure, however, did introduce some problems in analysis and interpretation. It led, in the first place, to differences in phrasing and organization of the ideas expressed. In many instances there was a partial overlap of two or more ideas which made a rigorous point-by-point comparison of the two lists difficult.

The committee was encouraged to identify and describe competencies without respect to existing standards. Its only limitation was that it should confine itself to competencies different in degree or kind from those required for regular teaching of normal children. The committee worked as a group and members had the advantage of cross checking with each other over a period of time in an effort to reach a consensus and to arrange the findings in a logical sequence.

This committee report was prepared by a group of persons all of whom were recognized *educators* in the field of mental retardation. In the setting of this study, extensive and intimate experience with the educational problems of the retarded child was given precedence over the somewhat broader perspective which might have been obtained by including social workers, doctors, school

administrators, and parents. It is hoped that in the future this report will be supplemented by a broadened range of opinion.

The committee settled upon four general categories for its report: The child, curriculum, method, and materials. Some such pattern would seem to be necessary in order to give organization to the field. At the same time, at least some important competencies may have been overlooked by the necessity of trying to fit all the competencies into a given set of categories. Finally, the committee pointed out another inadequacy, namely that this list was developed as of a certain time and place, and that the members might wish to modify their position as new knowledge was acquired. The same conditions also apply to the derivation of the list which was evaluated by the teachers.

Although teachers were limited to a prepared list of competencies, which they rated as to relative importance, they were free to elevate any item to the "very important" category, or relegate it to the "not important" classification. In this connection, one result is outstanding. The teachers did give a very high preponderance of "very important" and "important" evaluations to the competencies on the inquiry form. Not one of the items was rated as "not important" on the average.

Clearly, it is not possible to make a rigorous comparison of these two sets of data. On inspection, however, the list of competencies which the teachers

Baltimore Public Schools, Md.

Homemaking skills.

evaluated seem to overlap the committee report substantially. This is illustrated by the fact that is was possible to classify a large portion of the items in the teachers' list under the four main headings of the committee report.

Nevertheless, one of the most important things in the present study is the inventory of knowledge, understandings, abilities, and skills, individually considered. No summary analysis will replace a careful reading of the lists of items in the committee report and in table 1, point by point. The true significance of this part of the study lies in the fact that it makes a beginning inventory of the specific competencies needed by teachers of mentally retarded children. To find that the job can be analyzed into elements is in itself a step forward. To find a substantial agreement on these items is still another step forward. As the committee itself suggests, further research will undoubtedly modify these competencies in many respects. In the meantime they furnish a helpful frame of reference.

PERSONAL CHARACTERISTICS OF THE TEACHER

The checklist of 100 items in the questionnaire did not include references to the personality of the teacher. When the broad study was undertaken, it was decided not to try to include in the list competencies concerned with personal traits, mainly because research findings on the characteristics of successful teachers were already available and because a careful analysis of personality factors would have been a study in itself.

The 150 teachers, however, were very sensitive to the importance of the teacher's personality. This was shown by the large number of teachers who replied to a free response question which was included in the inquiry form. This was: "Are there personal characteristics needed by teachers of the mentally retarded which are different in degree or kind from those needed by a regular classroom teacher?" Typical responses of the teachers included: understanding the retarded child, acceptance of him as a person, sympathy for his limitations, and love for him as an individual. They also mentioned the teachers' need for greater flexibility and resourcefulness and his willingness to give time and effort to the pupils. Having an attractive personality, good emotional stability, and the ability to establish good relationships with others were also mentioned.

The competency committee also emphasized the importance of the personal characteristics of the teacher. Among the personal qualities the committee mentioned were: a genuine interest in the mentally retarded—one not motivated by personal identification; a high acceptance of the limited capacities of the retarded; and a high degree of ingenuity in adapting materials and methods to their needs.

Thus both groups mentioned as important the personal qualities of sympathy combined with objectivity, acceptance of the child, resourcefulness, and the willingness to exert more than ordinary effort.

Opinions on Teacher Proficiency

OPINIONS on the proficiency of teachers were obtained from two sources: (1) The 150 superior teachers who rated the competencies on the inquiry form for importance also rated their own proficiency on these same items, and (2) State and local directors and supervisors of special education evaluated certain general proficiencies of recently prepared teachers of the mentally retarded in their school systems. This section of the report includes an analysis of *self-ratings by experienced and superior teachers and some general evaluations by supervisory personnel of recently trained teachers.* All these opinions were collected through the inquiry forms.

TEACHERS' APPRAISAL OF THEIR OWN PROFICIENCY

The teachers rated their own proficiency on the competencies presented in table 1 under the three categories of "good," "fair," and "not prepared." The average self-ratings, given in rank order values for the 100 types of knowledge, skills, and abilities, appear in the right column of table 1 under the heading "rank order of proficiency."

On the 100 competencies the teachers gave themselves an average rating of "good" on 61, of "fair" on 38, and "not prepared" on only one. These relatively high evaluations of self-competence are perhaps more easily understood when one recalls that these teachers were considered superior in the eyes of their State and local supervisors.

Several aspects of these proficiency evaluations call for attention. (1) On what general types of competency did these teachers rate themselves as more proficient? on what types did they rate themselves as less proficient? (2) How did their self-ratings of proficiency compare with their ratings of the importance of the various competencies? (3) Was there a relationship between their evaluations of proficiency and their ratings of importance of the competence? An examination of the (top 10%) competencies in which the teachers felt they had the highest proficiency reveals such items as the following: ability to recognize *individual differences*, ability to help retarded pupils develop acceptable *patterns of behavior* and personal hygiene, ability to use a wide range of *techniques* in teaching reading, ability to provide a flexible, individualized *curriculum*, ability to remain objective while retaining sensitivity to the limited *achievements* of mentally retarded pupils, ability to visit homes

and work cooperatively with *parents*. It would appear that they feel the most proficient on items pertaining to everyday *classroom procedures*, general *adjustment problems of children*, and *working with parents*.

The teachers considered themselves least proficient on such competencies as administering projective tests, applying the Strauss technique, administering programs for the retarded, administering sociometric tests and social maturity scales, knowing about legal provisions, ability to teach multiple handicapped children, and ability to give speech correction. In general, it was on such matters as school administration, legal interpretation, and specialized child study techniques that they considered themselves the least proficient. Perhaps they felt that their preparation had been inadequate in these respects, or that these activities lay outside the domain of the teacher.

A question now arises on the relationship between the teachers' ratings of the "importance" of the competencies and their ratings of their proficiency in them. Was there a tendency for the individual teacher to rate himself "good" on those skills and abilities which he had evaluated as "very important"?

To answer this question, a statistical analysis was made of the responses. Coefficients of contingency were computed on a sample of items.[1] The median coefficient of contingency thus derived was .31 with a range from .18 to .46. This indicates a fairly high but varying relationship between the rank assigned by the teachers and the proficiency they believed they possessed in it. The relationship between these two factors would therefore seem not to be a simple and invariable one.

This brings the focus of interest to the competencies on which there were significant deviations between ratings of importance and proficiency. Differences occurred in both directions. On some items the teachers as a group rated their proficiency higher than they rated the importance of the competency. In other instances the reverse was true.[1] The competencies on which there was a significant difference are identified in table 1 by the symbol *sd*.

Importance Rated Higher Than Proficiency

One of the most important aspects of this evaluation is those competencies in which the teachers rated their proficiency significantly lower than the importance. There were 18 such competencies, which are listed in table 2.

The differences in the evaluation of these competencies deserve attention. Of the 18, 5 were rated by the teachers as "very important," 13 as "important"; not one was rated "less important" or "not important." The 5 valued as "very important" were: ability to interpret the behavior of mentally retarded pupils [5], to help them develop self-sufficiency in daily living and in planning for the future [6], to differentiate between social and emotional

[1] The statistical procedures used are described in appendix C, page 76.

TABLE 2.—Competencies in Which Self-ratings of Proficiency Were Lower Than Ratings of Importance (from table 1) [1]

Rank order of importance	ITEM	Rank order of proficiency
	COMPETENCIES RATED "VERY IMPORTANT" (5)	
	The ability—	
5	to interpret the behavior of mentally retarded pupils in terms of physical, psychological and environmental factors	22
6	to help mentally retarded develop self-sufficiency in daily living and in planning for the future	20
12	to differentiate between social and emotional maladjustment and mental retardation	42
20	to provide a wide range of experiences in community living for mentally retarded pupils	52
24	to analyze the factors which have contributed from infancy to the language development of each mentally retarded pupil, to evaluate continuously his level of development and to provide appropriate learning experiences at this level	58
	COMPETENCIES RATED "IMPORTANT" (13)	
	The ability—	
44	to differentiate between speech defects attributable to mental retardation, and those attributable to physical and emotional causes	82
46	to provide experiences for the mentally retarded in domestic arts	74
47	to make educational interpretations from medical (including psychiatric) reports	77
54	to promote occupational competency for mentally retarded pupils through efficient vocational guidance	84
58	to provide experiences for the mentally retarded in industrial arts	81
	A knowledge or understanding of—	
68	the physical and psychological abnormalities attributed to brain injury	85
75	provisions for mentally retarded children under existing Federal, State, and local laws and regulations pertaining to vocational training of mentally retarded youths and adults	94
78	the present status of medical treatment of mental deficiency	89
80	provisions for mentally retarded children under existing Federal, State, and local laws and regulations pertaining to employment practice	90

TABLE 2.—(continued)

Rank order of importance	ITEM	Rank order of proficiency
	COMPETENCIES RATED "IMPORTANT" (continued)	
82	The ability— to give speech correction to mentally retarded pupils with only occasional help of a correctionist	92
86	A knowledge or understanding of methods and/or techniques of teaching the speech handicapped	93
89	The ability— to teach mentally retarded having multiple handicaps, i.e., cerebral palsy, hearing or vision loss	95
94	to apply the Strauss technique	99

[1] See appendix C for statistical procedure used to determine significant differences.

maladjustment and mental retardation [12], to provide a wide range of community experiences in community living for retarded children [20] and to analyze factors which have to do with language development and provide appropriate learning experience [24].

In general, teachers felt significantly less proficient in 18 of the most difficult and intricate of all the skills listed in the inquiry form. The extent to which teacher proficiency along these lines can or should be increased is yet to be determined. These findings have serious implications for teachers themselves, for agencies concerned with the setting of professional standards, and for colleges and universities conducting programs for teachers of the mentally retarded.

Proficiency Rated Higher Than Importance

There were 14 competencies in which the teachers rated their proficiency at a significantly higher level than their ratings of importance. These are listed in table 3. One of these was in the "very important" category, 12 in the "important," and 1 in the "less important" grouping.

This group of competencies is difficult to interpret. For example, many of the teachers had transferred from regular teaching, and some of the items may have been ones for which they had less need when teaching mentally retarded children. There is a hint, too, that they felt that theory might have been over stressed in their teacher preparation experiences. Examples are: Evidence regarding inheritance of mental deficiency (87) and arguments for and against segregation (88). There is also a suggestion that they felt they possessed more proficiency in testing than the classroom job demanded.

TABLE 3.—Competencies in Which Ratings of Proficiency Were Higher Than Ratings of Importance (from table 1)

Rank order of importance	ITEM	Rank order of proficiency
	COMPETENCIES RATED "VERY IMPORTANT" (1)	
33	The ability to win the trust and approval of so-called normal children as well as mentally retarded pupils	1
	COMPETENCIES RATED "IMPORTANT" (12)	
	The ability—	
40	to see the value of, and to use, toys, games, etc., as educational toys for learning experiences	17
45	to counsel mentally retarded children with respect to their educational problems	19
57	to teach mentally retarded pupils to spell the words they need by using a variety of methods	14
61	A knowledge or understanding of evidence for and against effects of environment and training on the growth and development of mentally retarded children	34
	The ability—	
70	to interpret special educational programs for the mentally retarded and the problems and potentialities of these children, to related professional personnel, such as doctors and social workers	48
72	to interpret special educational programs for the mentally retarded, and the problems and potentialities of these children to non-professional school workers such as bus attendants, school custodians, etc.	36
81	to administer to mentally retarded individual diagnostic tests of arithmetic and reading disability	55
	A knowledge or understanding—	
87	of the evidence for inheritance of mental deficiency	66
88	of the arguments and studies for and against segregation of mentally retarded pupils in special classes	72
	The ability—	
90	to administer group achievement tests	24
92	to take responsibility for, or to assist with, one or more extra-curricular activities for mentally retarded, such as Scouts, hobby clubs	83
93	A knowledge or understanding of the history of education of the mentally retarded	75
	COMPETENCIES RATED "LESS IMPORTANT" (1)	
99	The ability to administer group intelligence tests	71

Palm Beach County Schools, Fla.

Learning social participation.

DIRECTORS' AND SUPERVISORS' APPRAISAL OF RECENTLY PREPARED TEACHERS

Both State and local directors and supervisors of special education also gave opinions on the proficiency of teachers of the mentally retarded. They expressed their satisfaction with the preparation of all recently prepared teachers in 14 aspects of the teaching program by giving "yes," "no," or "undecided" answers to a list of questions in the inquiry form. The answers in percentage form appear in table 4 below. In all but two questions (numbers 12 and 13) a "yes" answer expresses a better rating of the teachers; the discussion, therefore, will be centered on degrees of satisfaction rather than percentages replying "yes," "no," or "undecided."

To a great extent, State and local personnel agreed in their evaluations of the proficiency of these teachers; table 4 shows a marked parallelism. On only one question, however, was there a difference in the percentages of satisfaction which were statistically significant with a 1 percent probability of occurrence or less (see appendix C, page 78). The *State* personnel were significantly better satisfied than local personnel that the teachers had sufficient experience in classroom teaching of normal children (q. 1).[2]

[2] Q. 1 refers to Question 1 in table 4 and graph 1.

TABLE 4.—Evaluation of the Professional Preparation of Recently Prepared Teachers of the Mentally Retarded

Professional preparation	Number of persons answering		Percentage checking					
			State supervisory personnel			Local supervisory personnel		
	State	Local	Yes	No	Undecided	Yes	No	Undecided
Do you believe these recently graduated special education teachers have had sufficient experience—								
1. in classroom teaching with so-called normal children?	51	95	61	31	8	38	46	16
2. in supervised student-teaching and observation in their specialized area?	50	92	24	44	32	38	45	17
Do these teachers have adequate preparation—								
3. in developing and interpreting educational records?	48	95	37	42	21	47	32	21
4. in diagnosing causes of social and emotional maladjustments?	48	94	15	52	33	32	43	25
5. in group intelligence and achievement testing?	51	97	57	23	20	53	25	22
Do these teachers have an adequate understanding—								
6. of the basic principles of child growth and development?	48	97	52	29	19	61	23	16
Do these teachers have the ability to—								
7. plan with groups of pupils so as to provide for group participation according to each child's abilities?	48	95	60	13	27	67	20	13
8. plan a curriculum suited to the individual and group needs of their pupils?	46	96	56	22	22	57	26	17

TABLE 4.—(continued)

Professional preparation	Number of persons answering		Percentage checking					
			State supervisory personnel			Local supervisory personnel		
	State	Local	Yes	No	Undecided	Yes	No	Undecided
Do these teachers, upon graduating—								
9. have a working knowledge about agencies concerned with exceptional children, the services they offer, and how to secure these services?	49	98	29	55	16	24	56	20
Are these teachers, upon graduating—								
10. sufficiently familiar with the services provided for exceptional children by speech, psychological, and medical clinics, and so on?	49	97	22	47	31	27	44	29
Do these teachers have an—								
11. adequate basic orientation to the education of various types of exceptional children?	48	97	58	29	13	37	41	22
Have these teachers—								
12. 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?	47	97	38	[1](41)	21	39	[1](44)	17
Do these teachers tend to have—								
13. 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?	48	95	27	[1](56)	17	16	[1](72)	12
Are these teachers able to—								
14. ascertain and to teach at the appropriate developmental levels of their pupils?	48	97	64	19	17	54	23	23

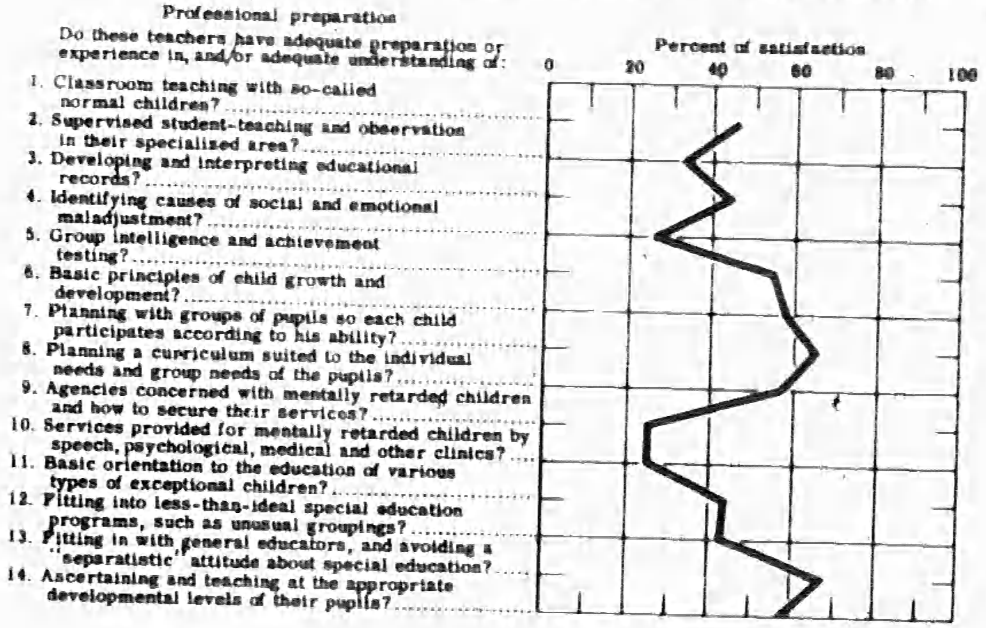
[1] In this case a "no" answer indicates satisfaction.

When the combined responses are examined (see graph 1) two facts are obvious. First, the percentages of responses indicating satisfaction were not high, averaging 46 percent with a range of 25 to 67; second, the average percent of satisfaction varied markedly from item to item.

There was, however, a block of competencies, basically classroom skills, which received both the highest expressions of satisfaction and the greatest unanimity in the responses. These were: (1) Ability to plan with pupils so as to provide for group participation according to each child's abilities (q. 7), (2) ability to ascertain appropriate developmental levels (q. 14) and plan instruction accordingly; (3) adequate understanding of child development (q. 6); and (4) ability to plan a curriculum suited to individual and group needs (q. 8).

On three aspects of teachers' proficiency, the supervisory personnel expressed great *dissatisfaction*. These were: (1) Identifying causes of social and emotional maladjustment (q. 4), (2) knowledge of agencies concerned with exceptional children (q. 9), and (3) knowledge of services provided for exceptional children by speech, psychological, and medical clinics (q. 10).

Graph 1.—Percent of supervisory personnel satisfied with the preparation of recently graduated teachers of mentally retarded children



Institutions preparing teachers might well examine their curriculums in the light of these opinions, with a view to strengthening these three aspects of the preparatory program.

It might also be noted that a rather large percentage of both State and local special educators were undecided about the proficiency of these teachers. On an average, 21 percent of the State personnel and 19 percent of the local personnel expressed indecision.

DISCUSSION OF PROFICIENCY EVALUATIONS

In this section, two different sets of data have been reported. The evaluations are by different groups, about different groups, on different but closely related sets of competencies.

In general, on the basis of these opinions, the teachers believed that they were doing their best work in the most important aspects of their job. They seemed to believe that a good piece of work in the classroom was their main assignment. They appeared to feel the least secure in the "fringe" areas, in diagnosis, in working with other agencies, in administration and legal interpretation, and—rather unexpectedly perhaps—in group testing. There seemed, too, to be shift of emphasis, in their feelings about proficiency, away from the arts and crafts and home economics phases of the work, toward more academic activities.

On the whole, the State and local supervisory personnel tended to rate recently trained teachers somewhat lower than one might have expected. They too, however, rated these teachers highest in their preparation for classroom work, general understanding of child development, ability to organize satisfactory working groups, ability to provide for individual differences, and curriculum development. They rated them lowest in allied activities, working with other agencies, and in deep understandings of adjustment problems.

Education and Experience

VARIOUS aspects of professional preparation and experience are treated in this section: First, the teachers' evaluations of the importance of specific practical experiences, and second, two types of practical experience which were evaluated by the teachers and by State and local supervisors and college instructors. These were (1) the amount of supervised student teaching of mentally retarded children that is needed and (2) the amount of teaching experience with normal children. Finally, there is a report of opinions (State, local and college personnel), on the general pattern of preparation of the teacher most likely to succeed.[1]

TEACHERS' OPINIONS OF PROFESSIONAL EXPERIENCES

The teachers evaluated the importance of a group of specific professional experiences, mostly of a practical nature, in the program of preparation for teachers of the mentally retarded. The questions were concerned with the following general groupings: Supervised student teaching experience, planned observation, planned visits, and experiences in drawing educational interpretations from various types of data relating to the problems of mental retardation. Teachers rated these as "very important," "important," "less important" or "not important." The results are presented in table 5.[2]

All these experiences received an average rating of either "very important" or "important." The five highest ranking items, however, were spread over a rather wide range of experiences, including student observation and teaching and experience in interpretation of educational records and psychological reports.

The upper ranking half of these experiences was dominated by two central themes: (1) *Actual supervised experiences in teaching retarded children,* and (2) *guided observation and participation in child study on a broad multi-professional basis.*

Student teaching of retarded children was stressed more at the elementary level [2][3] than the secondary [12] and nursery school [13] levels. This emphasis may be explained by the fact that the participating teachers were, in a large measure, working at the elementary level. Ranking only slightly

[1] See appendix D for excerpts from inquiry forms EXC–1, EXC–2A, EXC–3 and EXC–4F.
[2] See appendix C for a detailed description of the procedures used. (Pages 78 and 79).
[3] In each case the numbers in brackets refer to the rank order of importance in Table 5.

TABLE 5.—Relative Importance Which Teachers of Mentally Retarded Children Placed on Specific Experiences in Specialized Preparation

Rank order of importance [1]	EXPERIENCES
	Items rated "VERY IMPORTANT" (1—5)
1	Planned observation in day schools or classes for mentally retarded children
2	Supervised student-teaching with mentally retarded children at the elementary level
3	Experiences in giving individual instruction to mentally retarded children
4	Experience in drawing educational interpretations from—psychological reports
5	cumulative education records on mentally retarded pupils
	Items rated "IMPORTANT" (6—22)
6	Planned observation of conferences of teachers of the mentally retarded on pupil placement, curriculum adjustment, child study, and so on
7	Instruction in how to administer an education program for mentally retarded children
8	Experience in drawing educational interpretations from—medical reports (including psychiatric)
9	reports of social workers
10	Supervised student-teaching with normal children
11	Planned observation of multi-professional case conferences of representatives from such fields as social welfare, psychiatry, psychology, and medicine, to study and make recommendations on individual mentally retarded children
12	Supervised student-teaching with mentally retarded children—at the secondary level
13	at the nursery school level
14	Planned observation of children with multiple handicaps including mental retardation
15	Planned observation of work done by—rehabilitation centers for mentally retarded youths and adults
16	psychological clinics
17	Planned visits to homes of mentally retarded children in the company of supervising teachers
18	Planned observation of work done by speech clinics
19	Planned observation in residential schools for mentally retarded children
20	Planned visits to organizations interested in the welfare of the mentally retarded, such as State rehabilitation agencies
21	Planned visits to non-school community organizations offering services to the mentally retarded, such as recreation groups, clubs, and community houses
22	Planned observation in schools or classes dealing with other types of handicapped children

[1] The rank order of importance was derived from the average rating of importance for each item. See appendix C, page 78, for a detailed description of the statistical procedures used.

lower were planned observation of conferences of teachers of the retarded on pupil placement, curriculum adjustment and child study [6] and instruction in administering an educational program for retarded children [7].

Another group of experiences of high rank order brought in the individual child study element—experiences in giving individual instruction to retarded children [3] and interpreting psychological reports [4] and case study records [5]. Reinforcing these evaluations even further is the fact that three other child-study types of experience ranked only slightly lower. These were experience in drawing educational interpretations from medical reports [8] and reports of social workers [9], and planned observation of multi-professional case conferences [11].

STUDENT TEACHING OF MENTALLY RETARDED PUPILS

A basic question in programs of teacher preparation is the amount of supervised student teaching that should be required. Opinions were collected through the inquiry forms [8] from all groups participating in the study, on the amount of student teaching of retarded children necessary for two types of

[8] Form EXC–1, EXC–2A (5.4), EXC–3 (5.2, 5.3), EXC–4F (12).

Baltimore Public Schools, Md.

Expressive activities.

teacher candidates: (1) For those who have had 1 year or more of successful experience in regular classroom teaching, and (2) for those who have had only student teaching of normal children. The unit of measurement was the number of clock hours of student teaching of the retarded that was recommended. Discretion should be used in interpreting the data because there was wide variation in the responses.[4] The data are reported in the tabulation below, expressed in median percentages, and in graph 2, page 56:

Personnel responding[1]	*Median clock-hours recommended For teacher candidates with regular classroom experience*		
	Minimal	*Desirable*	*Ideal*
Teachers	40	131	205
State directors and supervisors in State school systems	60	144	229
Local directors and supervisors in local school systems	67	163	231
College and university instructors	78	158	238
	For teacher candidates with only student teaching of normal children		
	Minimal	*Desirable*	*Ideal*
Teachers	95	186	251
State directors and supervisors in State school systems	93	176	245
Local directors and supervisors in local school systems	115	191	259
College and university instructors	87	174	243

[1] Number responding to question as a whole: State—59/63; college—74/74; local—102/113; teachers—135/150; total—370/400.

Information on student teaching was obtained on a number of questions. The first question was whether the requirement in hours should be lower for teachers who have had regular classroom teaching experience with normal children. The second question was on the number of clock hours that should be required at the "minimal," "desirable," and "ideal" levels.

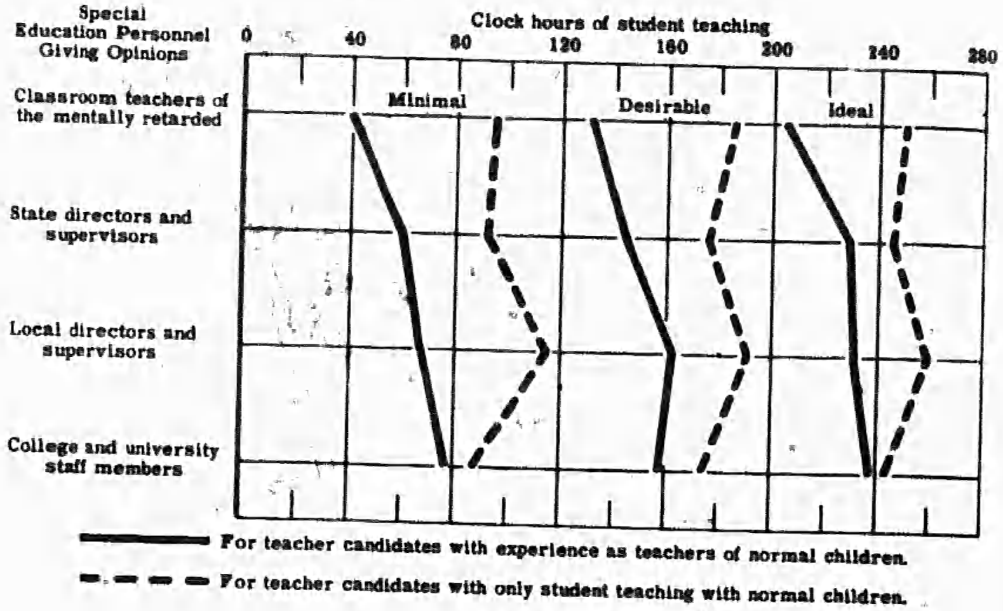
In answer to the first question, in all instances the groups recommended more clock hours of supervised teaching of the mentally retarded for persons who had only student teaching experience with normal children (see graph 2, page 56). This finding held for all three standards, "minimal," "desirable," and "ideal." Whether experience in teaching normal children should reduce the time required in supervised teaching of retarded children has been debated often. The evidence here is that fewer hours of supervised student teaching of the mentally retarded should be required of teacher candidates who have had regular teaching experience.

On the second question all groups participating recommended increasing the number of clock hours in all instances, from "minimal," to "desirable," to "ideal," for all teachers, those with and without regular classroom teaching experience. (See graph 2.)

There was a small, but systematic difference of opinion between the teachers and all other groups on the amount of student teaching that should be required

[4] See table in appendix C, page 81 for complete results.

Graph 2.—Amount of student teaching with retarded children needed by those preparing to teach in this area



of a teacher who has had on-the-job teaching experience with normal children. In each case, the teachers would require fewer clock hours of specialized student teaching than any other group. This opinion is corroborated in another way; [5] one-fourth of the teachers recommended that as a "minimal" requirement *no* student teaching of the mentally retarded should be required of teachers with regular classroom experience. The percentage that would accept "no student teaching" as the desirable or ideal level, however, was more nearly in accordance with other groups.

Unpublished data show that for teachers who have had regular classroom experience, median clock-hours recommended by the total group were "minimal," 59; "desirable," 149; "ideal," 227. For teachers with only student teaching of the normal, the average median clock hours were "minimal," 100; "desirable," 184; "ideal," 251.

In summary, the findings on student teaching of the retarded indicate general agreement that (1) supervised teaching of retarded children should be required of all prospective teachers of the retarded, regardless of their background in teaching normal children, (2) a larger amount of supervised teaching of the retarded should be required of teachers who have not had teaching experience with normal children, and (3) the number of hours recommended increased substantially from "minimal" to "desirable," to "ideal." Because of the scattering of the recommendations on the number of clock-hours, these data give only a tentative guideline for the setting of standards.

[5] See table in appendix C, page 81.

VALUE OF REGULAR CLASSROOM EXPERIENCE

Whether or not the special teacher requires regular teaching experience has long been debated in all areas of exceptionality. Opinions on this question were collected through the inquiry form from *all* educators participating in the study. All were requested to indicate the amount of classroom teaching experience with normal children which they considered "minimal," "desirable" and "ideal." The question (see appendix D) permitted a very wide selection of the amount of time from "none" to over 3 years of "on-the-job teaching," (and even more on the "write-in" basis). The findings appear in table 6, page 58.

Caution should be used in interpreting the data since there was a wide ranges of responses.

There are three main issues in this problem: (1) What percent of the groups would consider that no teaching experience with normal children is necessary? (2) How many would be satisfied with student teaching only? (3) How many would require regular on-the-job classroom teaching? The findings on these questions will be discussed on the basis of "minimal," "desirable," and "ideal," standard for all groups.

The first question was, *what percent of these groups would be satisfied*

Los Angeles City Schools, Calif.

Books are fun.

TABLE 6.—Amount of Teaching of Normal Children Rated as Minimal, Desirable, and Ideal by Teachers, State, Local and College Personnel [1]

Teaching experience (1)	Percent of personnel rating											
	Teachers			State			Local			College		
	M[2] (2)	D[3] (3)	I[4] (4)	M (5)	D (6)	I (7)	M (8)	D (9)	I (10)	M (11)	D (12)	I (13)
No classroom teaching	7	----	2	9	----	----	8	1	----	28	2	----
Student teaching	40	21	4	51	10	2	51	22	2	61	57	18
One semester, half-time	22	8	----	22	2	----	33	5	----	42	21	4
One semester, full-time	18	13	4	29	8	2	18	17	2	19	36	14
Regular classroom teaching	53	79	94	40	90	98	41	77	98	11	41	82
One year	31	30	9	34	41	6	26	31	21	11	29	27
Two years	13	37	25	4	43	30	12	33	28	----	10	35
Three years	9	12	55	2	6	58	2	13	44	----	2	18
Over three years	----	----	5	----	----	4	1	----	5	----	----	2
Number of persons answering	96	104	84	55	53	53	88	81	82	47	48	49

[1] Groups participating include 132 classroom teachers of the mentally retarded;
57 directors and 20 supervisors of special education in State departments of education;
81 directors and 19 supervisors of special education in local school systems, and
61 staff members in colleges and universities offering a specialized sequence in the area of the mentally retarded.
[2] M — minimal.
[3] D — desirable.
[4] I — ideal.

with no experience with normal children? The general consensus was that some teaching experience with normal pupils was necessary. Less than 10 percent thought that "no teaching of normal children" would be acceptable. The one exception was the college group, where about 25 percent checked "no experience." In *all* groups less than 2 percent would accept "no teaching experience with normal children" as "desirable" or "ideal."

The next question was, *would student teaching only be acceptable?* A substantially larger percentage of all groups would accept this as "minimal" requirement (opinions ranged from 40 to 61 percent). However, considerably fewer favored this as "desirable" (opinions ranged from 10 to 57 percent). As an "ideal" requirement, only 4 percent of the teachers and 2 percent of the State and local groups would accept student teaching only. In contrast 18 percent of the college instructors would accept student teaching only as "ideal."

The third question had to do with on-the-job teaching experience of normal children as a prerequisite to teaching the mentally retarded. This was highly favored by all groups, as "ideal" (range 82 to 98%). A large percentage of the teachers and their State and local supervisors believed that regular classroom teaching experience was of value even at the "minimal" level (range 40 to 53%). At the "desirable" level the percentage ranged from 77 to 90. The highest percentage of the teachers and their supervisors (see table 6) favored 1 year experience as a "minimal" standard, 2 years as "desirable," and 3 years as "ideal."

This question may be looked at from still another point of view. While there was a consensus that teaching experience with normal children was valuable, there also seemed to be agreement that diminishing returns resulted after the first 3 years. Less than 5 percent favored more than this amount as a prerequisite for teaching retarded children.

In general the college instructors were satisfied with much less teaching of normal children than were the other three groups. Various explanations of this attitude are possible. It may be that the teachers and supervisory personnel are closer to the mass of everyday school problems, and therefore place higher value on practical experience with normal children. Again, it may be that the college personnel are the ones most aware of the overcrowded teacher preparation curriculum and that they saw this as one means of reducing the pressure of time.

GENERAL PATTERN OF PROFESSIONAL BACKGROUND

One final problem was presented to the State and local supervisors and the college personnel under the following instructions: "Below are the qualifications of six candidates for positions on teachers of exceptional children. In your opinion, which two (2) would be the most likely to succeed?" The results are presented in the following tabulation:

	Qualifications	Percent [1] of persons selecting candidates			
		Total	State	Local	College
1	A 4-year undergraduate program of specialized preparation (including student teaching with normal and exceptional children); *no* teaching experience with *normal* or mentally retarded children	25	14	24	35
2	A 1-year graduate program of specialized preparation (including student teaching in the area of specialization) immediately following the completion of a bachelor's program in general teacher education *no* teaching experience with *normal* or mentally retarded children	39	40	30	54
3	A 1-year graduate program of specialized preparation (including student teaching in the area of specialization) for experienced regular teachers holding a bachelor's degree in general teacher education; teaching experience with *normal* children only	81	70	84	84
4	A bachelor's degree in general teacher education, but no specialized preparation; teaching experience with *normal* children only	3	7	4	.....
5	A bachelor's degree in general teacher education (including student teaching of normal children); no teaching experience with either *normal* or mentally retarded children	1	.....	3	.....
6	A bachelor's degree in general teacher education, but no specialized preparation; teaching experience with *normal* and mentally retarded children	32	32	41	19

[1] Percentages are based on number of persons responding. Percentages add to more than 100 since each respondent was asked to select two candidates. Number responding: State 57; college, 69; local, 105.

The elements included in the six combinations are: (1) Undergraduate general teacher preparation, (2) undergraduate specialized teacher preparation, (3) graduate specialized preparation, (4) student teaching of normal children, (5) specialized student teaching, (6) teaching experience with normal and mentally retarded children. Not all the possible combinations of these elements were included in the six choices. These six represent rather the extremes of the range and some of the more common situations met in practice. In the discussion the plans are referred to by number as they appear in the tabluation.

Plan 3 was given the highest rank by all groups. The elements included in this plan were, general preparation, general experience, specialized preparation and specialized student teaching. This has been one of the more frequently used plans. The standard is high, however, since it implies a 5-year program of preparation.

Ranked second highest by most groups was Plan 2. It differs from Plan 3 in omitting the element of experience in teaching normal children.

Plans 1 and 6 ranked next in order, and about equal in the ratings. They

offer a rather interesting contrast. Plan 1 is basically a specialized undergraduate course without experience beyond student teaching. Plan 6 is basically a general education background, but including experience in teaching normal and retarded children. It would seem that specialized preparation was in balance with experience in teaching both types of child, in the minds of those giving opinions.

This analysis leads to the general impression that these groups considered three elements to be the most important in the preparation of teachers of the mentally retarded. These are: (1) A background in general education, (2) specialized preparation, and (3) actual teaching experience. The plan which ranked highest, however, was the one which included four elements: General preparation, general experience, special preparation, and specialized student teaching experience.

SUMMARY

In this section, data were presented on experiences of significance in the preparation of teachers of the mentally retarded. Teachers evaluated the importance of a number of preparatory experiences. Data were presented on the importance of regular classroom teaching experience and of student teaching of retarded children. The general pattern of teacher preparation programs was briefly considered in terms of opinions of supervisory and teacher preparation personnel.

These questions represent, of course, only a preliminary sample of the many that require study. These, too, are all questions which must be considered individually and in detail. A beginning, however, has been made in identifying and approaching these problems empirically. Some of the more important experiences have been identified for further study, and some patterns in teacher preparation programs have been explored.

Summary and Implications

THIS PUBLICATION deals with the qualification and preparation of teachers of mentally retarded children. The findings are based on opinions of successful teachers of the mentally retarded, specialists in the field, directors of special education programs in State and local departments of education, and college staff members engaged in programs of teacher preparation in the field of exceptional children.

The basic purpose of the study was to develop a list of specific competencies, which, by agreement among nationally recognized persons in the field, are needed by successful teachers of retarded children. Admittedly the aims were rather high, and it is unlikely that any one teacher will possess all the competencies. It is also possible that no teacher preparation center will be able to offer in the near future a complete program as comprehensive as suggested by the opinions reported here. Rather, the report is intended to provide certain goals toward which teachers, specialists, and teacher-preparation institutions may build.

The list of competencies was approached in two ways. A committee of recognized specialists in the field was given an entirely free hand in drawing up such a list as a committee report. This report is included in the second section in this publication. Independently, the U.S. Office of Education study staff, in cooperation with well-prepared and experienced teachers of the retarded drew up another list. This list was submitted on inquiring forms to a nationwide group of successful teachers, who were asked to evaluate the importance of the competencies to successful teaching of retarded children.

Other data in the study included: Evaluations by the teachers of their own proficiency on the competencies they rated for importance; evaluations of recently prepared teachers by State and local personnel of a more generalized list of competencies; evaluations by teachers of certain generalized experiences in professional preparation; and evaluations by the teacher, State, local, and college personnel of the importance of experience in regular classroom work, and of student-teaching of the mentally retarded.

The more general findings and implications are listed below.

1. The various competencies in the teachers' list fell into certain groupings similar to those used by the competency committee. These included personal characteristics, understanding the mentally retarded child, curriculum, methods and materials of instruction. Background in special education, interpersonal relationships, and administrative and legal competencies were other general categories.

2. The teachers gave "very important" or "important" status to all but 6 of the 100 competencies listed.

3. The teachers emphasized the following general types of competency: understanding the retarded child in a general and practical rather than a highly technical and theoretical way, with special emphasis on understanding social and emotional development and causes of maladjustment. Ability to interpret tests, social work, and other diagnostic data, and to participate in teamwork with other agencies were emphasized over ability to perform all these services personally. Ability to teach the three R's effectively was given precedence over skills in teaching handwork, homemaking, and expressive activities. Socialization through unit teaching and participation in group activities and community type experiences was emphasized. There was less emphasis on highly specialized competencies in all areas, including some specialized teaching procedures. There was less interest in the total problem of exceptional children and in the multiply handicapped than might have been expected.

4. Self-evaluations of proficiency produced the following results. The teachers, probably for many complex reasons, tended to rate themselves as more proficient on the more important competencies. There was evidence to indicate that the teachers (1) felt there had been too much stress on theory and on testing, (2) expressed doubt about their proficiency in a number of very important and difficult diagnostic and technical procedures.

State and local personnel agreed relatively well in their appraisal of teacher proficiencies. Their percentage of satisfaction in the work being done was rather low—at about the 50 percent mark. There also was a good deal of indecision (about 20 percent).

The highest satisfaction expressed was in a block of classroom skills, providing for group participation, teaching at the proper level, understanding of child development and planning curriculum, and preparation for group testing. They questioned most the amount of student-teaching of the retarded these teachers had and their familiarity with working relations with other agencies.

5. Evaluations of preparatory professional experiences produced the following general results. The preparatory professional experiences receiving highest rank by the teachers were: Student-teaching and on-the-job teaching of retarded children, general teacher preparation, and teaching normal children. Experiences in drawing educational interpretations from technical data were also stressed.

The teachers' responses implied that more opportunity for applied experiences should be offered during their student-teaching sequence in activities "outside of the classroom" such as visits to non-school community organizations, visits to organizations interested in the welfare of the mentally retarded, observation of work done by rehabilitation centers, observation of children with multiple handicaps including mental retardation and multi-professional case conferences. The sequence of preparation of teachers for mentally retarded children should be reconsidered on the basis of these findings.

6. All groups were in favor of teaching experience with normal children. While the majority favored up to 3 years' experience in regular classroom teaching, student-teaching only was considered sufficient by many. All groups agreed that supervised student-teaching of retarded children was essential, even for teachers who have had on-the-job experience in regular classes.

7. All groups in this report recommended that colleges and universities proposing to offer a sequence of preparation for teachers of the mentally retarded children provide facilities for student-teaching with mentally retarded children of various ages and degrees of mental retardation.

8. Since the teachers and others thought that their preparation had not included sufficient orientation in the education of other types of exceptional children, further emphasis should be given to these areas in teacher preparation

9. As one considers the minimal personal qualifications described by the competency committee and the written-in responses of the teachers regarding personal characteristics, there is little question that they believe a special kind of person is needed. The work conference group suggested that initial selection of persons for teacher training be made with an understanding that certain competencies are basic and that not all "good" teachers will necessarily become good teachers of the mentally retarded, one reason for this being that teachers of the mentally retarded must be able to think outside of a "usual" frame of reference. While this does not necessarily mean that other teachers do not need this ability, it does mean that persons should not be encouraged to go into this field if this type of thinking is frustrating to them.

This was essentially an exploratory study. It was undertaken at a time when no coordinated attempt had been made to define and inventory the special teacher's job or to differentiate it from what should be expected of all teachers in the way of competencies.

To make such an inventory was not an easy task. As the committee itself pointed out, this list is subject to revision as new evidence accumulates. But it is a beginning. It has at least the validity of being the consensus of opinion of a nationally recognized group of educators of the mentally retarded. While this may have limited the sampling of opinion somewhat, it still seemed best to sample first, on the problem of teacher competencies, the opinions of specialists in the education of the mentally retarded.

It may seem cumbersome at first reading, but this very quality is itself an evidence of the extent to which the teacher's task can be broken into specific units. While some of the differentiations may seem rather minute, still it would seem to be the better procedure at present to break the competencies into small elements and then to recombine them into larger units in the teacher preparation program.

What sort of list of competencies did this group of specialists produce? While their avowed purpose was to bring out a list which lies outside the field of regular teaching, even the most casual reading of either set of com-

petencies in this report will indicate that they only partly succeeded. Any teacher, for example, is interested in individual differences, in understanding each child, in social and emotional development, and so on.

This overlap appears in many connections in this report: in the items selected by the competency committee, in the ratings of importance of competencies by the teachers and in the responses to the specific questions on the importance of regular teaching experience by teachers and State, local, and college personnel. This point of view also reinforces the relatively high rank given by the teachers to the need for giving the retarded child many experiences in community living, [17], [20], "the ability to fit the special program for the mentally retarded pupils into the total school program" [38], and "the ability to encourage and create situations in school in which the mentally retarded and so-called normal children work and/or play together" [29].

Perhaps a conservative position is the one nearest the truth in this case; perhaps the good teacher of the retarded is more like other teachers than unlike them, just as the retarded child himself is more like other children than unlike them. Perhaps the "regular" teacher must possess many skills of adapting methods and materials to the slower learner in common with the teacher of the retarded. At the extreme end of the distribution there no doubt are competencies which the teacher of the retarded must master but which will be relatively unknown to the regular teacher.

This point of view is easiest to see in the case of public school special classes for high grade retarded children, and perhaps the particular sampling of opinions used was biased in this direction. Yet, such procedures as "exit cottages" for children about to be released from institutions to community life are an admission of the need for "regular" experience, if not "regular" teaching for the retarded.

Nevertheless, the data indicate that there is a long list of competencies in the teaching of the retarded which, even if they are not confined exclusively to such teachers, should at least receive more than ordinary emphasis in the preparation of teachers in this field. These include an attitude toward the problem, a certain kind of personality, special skills, knowledge and abilities, and a philosophy of education for the retarded.

The results have implications for teachers of the retarded and for those who help prepare and who work with teachers of the retarded. The usefulness of these findings might well begin at the point where prospective teachers are deciding whether they would like to enter this particular field. The job description included, with good guidance, might give them a much more specific basis for such a decision.

The usefulness of the report for teachers in the field is of two kinds at least, as has been suggested earlier: (1) It contains an inventory of competencies as worked out and appraised by leaders in the field, and (2) it can

serve as a self-inventory guide for better preparation to do the job well. Used in this way, it may open up for a given teacher new possibilities of service in the particular position he now holds. A teacher in an isolated rural situation, for example, may be encouraged to visit the parents of the children in his group as well as to develop better working relationships with the doctors, nurses and social workers in the community and county offices.

Data of this type should assist directors and supervisors as well as school administrators in selection of persons for work in this field. They may also serve as a means of implementing conferences with teachers on their further preparation as well as the work they are now doing.

These data should also provide helpful guidelines to college staffs in planning an adequate program of teacher preparation in the field. At one extreme, their findings might be helpful to an institution of higher learning in deciding whether or not it can offer an adequate sequence of work in this field. At the other extreme, they can serve as a checklist of current gaps or underemphases in their offerings.

As colleges and universities now move in the direction of more specific listings of their teacher preparation objectives, State certification standards may also begin to move away from a vague listing of "courses" toward statements more nearly in the form of competencies. In the meantime, the breadth of competencies included in this report may encourage a reevaluation of current certification standards.

Another major problem that appeared in the study is the delimitation of the teachers' place in the overall setting of the care of the mentally retarded child. Hints as to this problem appear in many places in this report. Broad as it is in general outline, the committee report omitted many competencies needed in the complete care of the retarded, medical diagnosis and treatment, social casework, religious guidance, home care, nutrition, and so on. The teachers' evaluations repeatedly indicated a hierarchy of importance in related series of competencies as has been pointed out. The results from State, local, and college personnel also hint at possible delimitations of the teacher's task.

These are leads, but a real investigation of the problem must await further study. The net result of the data in this report is to suggest that the teacher's primary assignment is, though on a broad child-development basis, in the school and its closely related activities. One might suggest that the next most significant circle of competencies should be in such areas as "the ability to cooperate with special teachers and other school personnel in developing an integrated program for each mentally retarded pupil," and "the ability to work as a member of a team with other professional workers . . ."

Perhaps too little has been said throughout this report about one other aspect of competency of paramount importance. This point was made in the report on *Teachers of Children Who are Deaf*. The following sentences

are quoted from this publication: "Our scheme of delineating areas of knowledge and abilities should not suggest that we fail to recognize the inter-relationship of various areas. Actually, the ability of the teacher to unify and integrate all the areas in her approach to the children is the sine qua non of all the competencies.[1]"

[1] Romaine P. Mackie, *Teachers of Children Who Are Deaf; U.S. Department of Health, Education, and Welfare;* Office of Education, Bulletin 1955, No. 6, 86p.

Areas for Further Study

THE COMPETENCY committee report and the data from the inquiry forms serve as a beginning in the analysis of qualification and preparation of teachers of mentally retarded children, but much more remains to be done. The following areas appear to be worthy of consideration for future follow-up.

1. The present study concerned itself with the competencies required of the teachers of educable mentally retarded children. During the past several years, considerable attention has been given to the severely retarded child by parent and other private groups, public welfare agencies, and public schools. The variety of programs being developed, the multiplicity of agencies participating in the development of the services, the extremes in qualifications of teachers participating in existing programs, and the lack of specific knowledge, skills, understandings, and teaching techniques applicable to the "trainable" child seem to point up the need for an extensive study of the competencies required by teachers of the severely mentally retarded child.

2. One of the issues coming out of this study relates to the desirability and amount of regular teaching experience (with normal children) as a prerequisite to successful teaching of mentally retarded children. The data indicate that teachers of mentally retarded children and State and local special education personnel are in favor of regular teaching experience as a desirable prerequisite to successful teaching of mentally retarded children. An analytical study of experience as a factor in successful teaching would have value.

3. The opinions sampled in this study were almost entirely those of public school teachers of classes for educable children, State and city public school personnel, and college staffs. Samplings of opinion from institutional and private school personnel would be a very useful check on the validity of these opinions. Similarly, opinions from personnel in related fields such as social work, psychiatry and psychology, and general education might be revealing.

4. The role of the teacher of mentally retarded children in the "team" approach to dealing with the total planning for mentally retarded children should be studied further. As one evaluates the competency committee report and the inquiry forms, he is made aware of the many "professional" areas in which the teacher of mentally retarded children is expected to function (psychology, social welfare, health, etc.). While the teacher's first responsibility should be to the activities and problems within the classroom and to out-of-school activities relating to classroom activities, more will be required

and expected of the teacher as knowledge of the mentally retarded child increases. A major contribution to improving the status of the teachers of mentally retarded children and to dignifying the role he is now playing in the education of mentally retarded children might be made by careful studies along this line.

5. This last observation clearly points up the need for further study of whether the length of the training period should be extended.

6. The competency committee report suggests that mentally retarded children have specific learning characteristics, and that their learning processes seem to differ quantitatively and qualitatively from the normal. Because of these differences in learning characteristics, it is essential that further search be made for the specific techniques of teaching best adapted to the needs of these children. New information of this type will immediately affect the content of the teacher-preparation program.

7. This report also offers leads to a large number of more detailed studies of individual competencies or groups of competencies.

Appendix A.—Plan and Procedures Used in the 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, of New York City. It was directed by a member of the Office of Education staff, who was counseled by two committees. One was an *Office of Education Policy Committee,* whose function it was to assist the director in management and personnel aspects of the study. The other was a *National Advisory Committee* of leaders in special education from various parts of the United States; it was the function of this group to help identify the problems, to assist in the development of the design of the study, and to otherwise facilitate the project. The study staff also had the counsel of a number of consultants who reviewed written material and made suggestions on personnel and procedures. (A complete list of committee members and consultants appears on pages ii-iv.)

The general purpose of the study was to learn more about the qualification, distinctive competencies, and specialized preparation needed by teachers of handicapped and gifted pupils. The term "teachers" was interpreted broadly to mean not only classroom instructors of the various types of exceptional children, but also directors and specialists in State and local school systems, and professors of special education in colleges and universities. Separate studies were 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 on the qualification and prepara-

tion needed by special education personnel. One was by means of a series of *inquiry forms;* the other was through a *committee* statement describing desirable competencies. The plan of the study also included provision 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 educators had opportunity to express their views on the distinctive skills, competencies, and experiences which they considered 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 those 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 such committees in all. The names of these committee members were proposed by the National Committee, and the chairmen were appointed by the U.S. Commissioner of Education. Each committee was composed of from 6 to 12 leading educators in the 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 working conference on the distinctive competencies required by special educators. In October 1954, a long-anticipated week's work conference was convened in Washington, when working papers incorporating all data collected were presented, reviewed, and modified. The occasion provided opportunity for a free exchange of views and for analysis and interpretation of data.

The findings 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—The 150 Teachers of Mentally Retarded Children Participating in the Study

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

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 as classroom teachers and that they be superior in the opinion of their supervisors; (2) that they have specialized preparation for teaching mentally retarded children; (3) that, insofar as possible, teachers be chosen so that about half of the number would have received their specialized professional preparation before January 1, 1946, and the other half after that date; and (4) that the selection be made as widely as possible from various types of teaching situations, such as urban and rural centers, public and private schools.

In order to obtain at least 100 completed inquiry forms from teachers who would meet the criteria set by the study, a list of approximately 200 teachers was compiled. State departments of education submitted the names and addresses of 353 teachers of mentally retarded children. Inquiry forms were sent to all of them; 214 forms were completed and returned. Sixty-four respondents did not meet the criteria set forth in the guidelines; some were not classroom teachers, others did not have specialized preparation. For these reasons the number was reduced to 150. The forms were separated into two groups, one of 75 teachers who had completed their specialized preparation before January 1, 1946, the other of the 75 teachers who had completed their specialized professional preparation since that date. Findings are reported for the total 150 teachers since there were found to be few statistically significant

differences of opinion between these two groups. Where these differences occur, they have been pointed out in the text.

Background information on the school situations in which the 150 participating teachers were employed, and on their professional training is presented here, but it should be interpreted with extreme caution. The information is not intended to have any program implications, since the study of programs for the education of mentally retarded children is not within the scope of this project. It is presented solely because opinions reported in this bulletin can sometimes be more accurately interpreted in the light of knowledge of the school situations in which the contributing teachers were employed, the grade level at which they were working, or their own professional preparation.

The type of school organization in which the 150 participating teachers of mentally retarded children were working is shown below:

Type of organization	*Number*	*Percent*
Total	150	100
Special day school for mentally retarded children only	14	9
Center of two or more special classes for mentally retarded children in a regular day school	71	48
Single special class for mentally retarded children in a regular day school	65	43

The chronological age of the pupils taught by the participating teachers follows:

Measure	*Chronological age of pupils*
Average of the lowest chronological age	9.5
Average chronological age	11.8
Average of the highest chronological age	14.
Lowest chronological age reported	4.
Highest chronological age reported	21.

The intelligence quotient of pupils taught by the participating teachers was reported as follows:

Measure	*Intelligence quotient of pupils*
Average of the lowest I.Q.	51.4
Average I.Q.	65.9
Average of the highest I.Q.	77.
Higest I.Q. reported	80.
Lowest I.Q. reported	30.

The specialized preparation of the participating teachers is summarized below:

Level	*Number*	*Percent*
Total	150	100
Graduate	76	51
Undergraduate	67	44
Residental school for the mentally retarded	6	4
Inservice experience	1	1

The proportion of participating teachers who received their specialized preparation before or after teaching normal children was as follows:

Time of preparation	*Number*	*Percent*
Total	150	100
Before teaching normal children	40	26
After teaching normal children	109	73
No information	1	1

The proportion of participating teachers who received their specialized preparation prior to or concurrently with teaching mentally retarded children was:

Time of preparation	*Number*	*Percent*
Total	150	100
Before teaching mentally retarded children	64	43
Concurrent with teaching mentally retarded children	86	57

Appendix C.—Statistical Procedures and Results

PROCEDURES USED IN ANALYZING DATA IN TABLE 1

EACH of the 100 competencies (knowledge and abilities) listed in table 1 was rated in two ways by the 150 participating teachers. First they checked whether, in their judgment, each item was "very important," "important," "less important," or "not important" in their present position as a teacher of mentally retarded children. Second, they checked whether they considered themselves to be "good," "fair," or "not prepared" in each of these competencies.

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

The *average proficiency* of the teachers was computed in the same way, using a numerical value of 3.99 for "good," 2.64 for "fair," and 1.31 for "not prepared." These numerical values ("converted scores") were used to make possible a comparison between the ratings of importance on a 4-point scale and the ratings of proficiency on a 3-point scale. They were derived as follows: The average rating of importance was found for all the competencies. This average was 3.30. Then the standard deviation was found for this distribution; it was 0.89. 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. The standard deviation was found for this distribution (0.67) so that the distance of weightings 3, 2, and 1 from 2.49 could be expressed in z-score units. 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 $(3 - 2.49)/0.67$, which equals $+ 0.77$. Using the standard deviation of the first distribution as a unit, this yields $+ 0.77 \times 0.89$, or $+ 0.69$. Adding 0.69 to the mean of the first distribution yields 3.30 plus 0.69 or 3.99. This is the "converted score" assigned to the checks in the "good" column.

A *rank order* of the list of 100 competencies was determined for both the average ratings of importance and the average ratings of proficiency. Consecu-

tive 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; it was possible because of the negligible differences between the average of any one item and the next in the list. The items have been arranged in table 1, page 24, according to the rank order of importance; the rank order of proficiency is indicated by a symbol at the end of each item, for example (P, 2) appears immediately following item 1 in the table. This item was ranked first in importance and second in proficiency. Rank order numbers and the range of average ratings of the 100 competency items within each category of importance are shown below. Tables with the average rating for *each* competency are available upon request from the Office of Education.

Category	Range of average ratings	Rank order numbers
Very important (3.50 or above)	3.50—3.95	1—36
Important (2.50—3.49)	2.50—3.49	37—94
Less important (1.50—2.49)	2.02—2.44	95—100
Not important (1.49 or under)	....	....
Good (3.32 or above)	3.34—3.89	1—61
Fair (1.98—3.31)	2.03—3.31	62—99
Not prepared (1.97 or under)	1.80	100 ....

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 resources for a complete analysis of all the data were not available, and because a complete analysis did not seem necessary, a random sample of 10 competency items was drawn from the list of 100. 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 co-efficient 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 co-efficient. Most of the contingency co-efficients were computed from 3 x 2 tables, though some were computed from 3 x 3, and some from 2 x 2, and one from a 3 x 4 table.

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

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

The median co-efficient of contingency of the 10 items was 0.31, with a range from 0.18 to 0.46, in a situation where the median maximum possible value would be 0.66, with a range from 0.47 to 0.78.

Statistical Significance of Differences Between Average Ratings of Importance and Average Ratings of Proficiency

To determine the statistical significance of the difference between the average importance rating and the average rating of proficiency on an item, the procedure employed was as follows: The difference between the ratings on importance and proficiency ("converted scores") for each teacher was determined ($I_1 - P_1$ through $I_{150} - P_{150}$, where the subscripts 1 through 150 represent the individual teachers answering the question). The mean difference between ratings for all teachers was calculated ($\frac{\Sigma D}{N}$); the standard deviation $\left(\sqrt{\frac{\Sigma D^2}{N} - (M_D)^2}\right)$ and the standard error of the mean of the differences $\left(\frac{\sigma_D}{\sqrt{N}}\right)$ was computed; the mean difference was expressed in z-score units $\left(\frac{M_D}{\sigma_{M_D}}\right)$ (this is the "critical ratio"); and the probability of an average difference as large as or larger than the one obtained for a given item was read from the appropriate table of probabilities. (References: Quinn McNemar, *Psychological Statistics*, pages 73–75). Differences were considered to be significant if the probability of occurtence was 0.01 or less.

In the procedure described above, only *paired* ratings were employed; thus, if a teacher rated an item for importance, but failed to make a proficiency

rating for the item, it was impossible to determine the difference between importance and proficiency of that teacher for that item. The teacher's response to this item was therefore not usable in this calculation. It should be pointed out that *all* teachers' ratings were used in obtaining both the averages for importance and for proficiency on which the ranks in table 1 are based.

In the case of items for which the difference between the average importance rating and the average proficiency rating (converted scores) was less than 0.20, no test of statistical significance was employed. It was considered that differences smaller than 0.20 were too small to have any practical significance. Of those items tested, 32 showed a statistically significant difference between ratings of importance and proficiency. These are indicated in table 1, page 24, by the symbol *sd* in the right-hand column, and are discussed on page 42.

PROCEDURES USED IN ANALYZING DATA IN TABLE 4

The differences between the percent of "yes" (satisfied) responses of State personnel and of local personnel to the various questions in table 4 were tested for statistical significance. For the items tested, the "yes" responses in each of the two groups were expressed as a percent of all responses in the group (i.e., the "yes" responses of the State personnel to an item were expressed as a percent, p_1, of all responses of State personnel to that item, and the "yes" responses of local personnel to the same item were expressed as a percent, p_2, of all responses of local personnel to that item). The standard errors of the percentages (p_1 and p_2) were computed by the formulas, $\sigma_{p_1} = \sqrt{\frac{p_1 q_1}{N_1}}$ and $\sigma_{p_2} = \sqrt{\frac{p_2 q_2}{N_2}}$. In these formulas, $q_1 = 1 - p_1$ and $q_2 = 1 - p_2$. The standard error of the difference between the two percentages was determined by the formula, $\sigma_{p_1 - p_2} = \sqrt{\sigma^2 p_1 + \sigma^2 p_2}$. 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 was read from the appropriate table. Differences were considered to be significant if the probability of occurrence was 0.01 or less.

PROCEDURES USED IN ANALYZING DATA IN TABLE 5

The 150 teachers rated the relative importance of each of 22 experiences by checking whether, in their judgment, it was "very important," "important," "less important," or "not important" to include the experiences in the specialized preparation of teachers of mentally retarded children. The *average*

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

A *rank order* of the list of experiences was then determined on the basis of these average ratings of importance. The items have been arranged in table 5 according to this rank order of importance. The rank order numbers and range of average ratings within each category of importance are shown below. Tables with the average rating for each experience are available upon request from the Office of Education.

Category	Range of average ratings	Rank order numbers
Very important (3.50 or above)	3.50—[illegible]	1—5
Important (2.50—3.49)	2.81—3.41	6—22
Less important (1.50—2.49)	....	....
Not important (1.49 or under)	....	....

COMPARISON OF OPINIONS OF TEACHERS PREPARED BEFORE JANUARY 1, 1946 AND THOSE PREPARED SINCE THAT DATE

The 150 inquiry forms were tabulated so that the responses of the 75 teachers who had received their specialized preparation before January 1, 1946, could be compared with the responses of the 75 teachers who had received their specialized preparation since that date. The differences in opinion expressed by these two groups on the importance of the items listed in tables 1 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 before 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 deviations of the universes of which the X_1 and X_2 scores were samples were computed $\left(\sigma_1 = \sqrt{\left(\frac{\Sigma fx_1^2}{N_1 - 1}\right)}\right.$ and $\left(\sigma_2 = \sqrt{\left(\frac{\Sigma fx_2^2}{N_2 - 1}\right)}\right.$; and the estimate of the standard error of the difference between the averages was determined $\left(\sigma_{M_1 - M_2} = \sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}\right)$ The observed difference between the averages of the two samples $(M_1 - M_2)$ was then expressed in z-score units

$\left(\frac{M_1 - M_2}{\sigma_{M_1 - M_2}}\right)$. 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 curves ("Proportion of Area Under the Normal Curve Lying More Than A Specified Number of Standard Deviations $\left(\frac{X}{\sigma}\right)$ from the Mean").

Three of the competency items in table 1 showed differences in the average ratings given by the "prior" and "since" groups. The "since" group considered items 39 and 49 more important than did the "prior" group. The "prior" group considered item 62 more important.

No differences were found between the opinions of the two groups on any experience in table 5 which had a probability of occurrence of 0.01 or less. The raw data, tabulated according to the foregoing categories, are on file in the Office of Education.

ADDITIONAL INFORMATION ON PROFESSIONAL PREPARATION

The opinions reported in graph 2, page 56, indicated the median number of clock hours of student teaching of mentally retarded children needed by teacher-candidates with regular classroom experience and by teacher-candidates with only student teaching experience with normal children. The detailed information in the following table is presented so that the reader may note the wide range of opinions expressed by the participants on this question.

Percent of Special Education Personnel Indicating Number of Clock Hours of Student Teaching With Mentally Retarded Children Needed By Those Preparing to Teach in This Area

Clock hours	For teacher-candidates with regular classroom experience with normal children				For teacher-candidates with only student-teaching with normal children			
	Percent of personnel rating				Percent of personnel rating			
	Teachers	State	Local	College	Teachers	State	Local	College
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
MINIMAL								
None	25	13	7	10	6	8	.....	6
1-75	48	46	49	39	33	33	20	37
76-150	18	31	36	42	43	37	58	41
151-225	8	4	7	8	8	10	16	14
226-300	1	6	1	1	10	10	6	2
Over 300	.....	.....	.....	.....	.....	2	.....	.....
Number answering	98	52	86	62	90	51	81	64
Median clock hours	40	60	67	78	95	93	115	87
DESIRABLE								
None	.....	.....	.....	.....	.....	.....	.....	.....
1-75	20	20	6	11	1	9	3	7
76-150	41	33	36	35	23	24	17	28
151-225	29	37	48	42	54	51	56	48
226-300	10	2	10	12	21	9	21	17
Over 300	.....	8	.....	.....	1	7	3	.....
Number answering	87	51	86	57	91	43	76	60
Median clock hours	131	144	163	158	186	176	191	174
IDEAL								
None	.....	.....	.....	.....	.....	.....	.....	.....
1-75	10	2	3	4	2	.....	.....	4
76-150	21	13	6	13	7	12	3	6
151-225	26	33	37	25	18	23	18	27
226-300	42	48	53	49	68	58	66	55
Over 300	1	4	1	9	5	7	13	8
Number answering	93	48	78	55	84	40	77	51
Median clock hours	205	229	231	238	251	246	259	245

Appendix D.—Excerpts From Inquiry Forms

EXCERPTS FROM INQUIRY FORM FILLED OUT BY TEACHERS OF MENTALLY RETARDED CHILDREN

The Office of Education Study

"QUALIFICATIONS AND PREPARATION OF TEACHERS OF EXCEPTIONAL CHILDREN"

INQUIRY FORM EXC–4F: For Teachers of Children Who Are Mentally Retarded

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 V ONE of the following:

_____Residential school for mentally retarded children
_____Special day school for mentally retarded children only
_____Center of two or more special classes for mentally retarded children in a regular day school
_____Single special class for mentally retarded children in a regular day school
_____*Other:* (specify)

1.5 Indicate by filling in the blanks:

_____Total number of pupils in your class
_____Number of girls in your class
_____Number of boys in your class

1.6 Give the lower and upper chronological age limits and the average C.A. of the group of mentally retarded children that you teach by placing a circle around THREE of the following:

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

1.7 Give the approximate lower and upper I.Q. limits and the average I.Q. of the group of mentally retarded children that you teach by placing a circle around THREE of the following:

25 and below 30 35 40 45 50 55 60 65 70 75 80 and above

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

1.8 Indicate the period in which you took the *major* part of your specialized preparation which led to your initial certification or approval as a teacher of mentally retarded children by checking V ONE of the following:

_____Prior to December 31, 1945 _____Since January 1, 1946

1.9 Indicate the plan by which you received the *major* part of your specialized preparation in the education of mentally retarded children.

(Place ONE check V 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 mentally retarded children	Concurrently with teaching mentally retarded children	Prior to teaching mentally retarded children	Concurrently with teaching mentally retarded 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 mentally retarded independent of a degree-granting institution (therefore without college credit.					
Other: (Specify—in-service program offered by a school or school system, etc.)					

[1] An accredited college or university is defined by the Division of Higher Education, U.S. 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 mentally retarded children, how important is it that you possess the following competencies?
(Check V 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 V ONE of the three columns on the *right* for each item.)

Very important	Important	Less important	Not important	ITEM [1]	Good	Fair	Not prepared
				The ability:			
				to administer to mentally retarded children—			
				3.1 group intelligence tests			
				3.2 individual verbal and performance tests of mental ability.			
				3.3 standardized group achievement tests			
				3.4 group interest and special aptitude tests, and tests of social and emotional adjustment.			
				3.5 individual diagnostic tests of arithmetic and reading disability.			
				A knowledge and/or understanding of—			
				provisions for mentally retarded children under existing Federal, State and local laws and regulations pertaining to—			
				3.95 employment practices			
				3.96 educational provisions			
				3.97 juvenile delinquency and probation			
				3.98 vocational training of mentally retarded youths and adults (vocational rehabilitation programs).			
				3.99 the purposes, services and locations of national organizations concerned with the education and/or general welfare of the mentally retarded, such as the International Council for Exceptional Children, American Association on Mental Deficiency, the National Association for Retarded Children etc.			
				3.100 sources of, and services offered by, non-school organizations such as clinics, courts, clubs, churches, welfare agencies and rehabilitation agencies for mentally retarded children and their parents.			

[1] All of the 100 items appearing in table 1 were included in this question in the inquiry form, although not in the same order as in the table.

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

AND

How much emphasis was placed on these experiences by the institution at which you received the *major* part of your specialized preparation which led to your initial certification or approval as a teacher of the mentally retarded?
(Check V ONE of the four columns on the *right* for each item.)

Very important	Important	Less important	Not important	ITEM	Too much	About right	Too little	None at all
				5.1 Supervised student-teaching with so-called normal children.				
				Supervised student-teaching with mentally retarded children—				
				5.2 at the nursery school level				
				5.3 at the elementary level				
				5.4 at the secondary level				
				Planned observation—				
				5.5 in day schools or classes for mentally retarded children.				
				5.6 in residential schools for mentally retarded children.				
				5.7 in schools or classes dealing with other types of handicapped children.				
				5.8 of children with multiple handicaps including mental retardation.				
				5.9 of multi-professional case conferences of representatives from such fields as social welfare, psychiatric, psychological and medical, to study and make recommendations on individual mentally retarded children.				
				5.10 of conferences of on-the-job teachers of mentally retarded, on pupil placement, curriculum adjustment, child study and so on.				
				Planned observation of work done by—				
				5.11 rehabilitation centers for mentally retarded youth and adults.				
				5.12 psychological clinics				
				5.13 speech clinics				
				Planned visits—				
				5.14 to non-school community organizations offering services to the mentally retarded such as recreation groups, clubs and community houses.				

5 (continued)

Very important	Important	Less important	Not important	ITEM	Too much	About right	Too little	None at all
				5.15 to organizations interested in welfare of the mentally retarded, such as State Rehabilitation Agencies etc.				
				5.16 Visits to homes of mentally retarded children in the company of supervising teachers.				
				5.17 Experiences in giving individual instruction to mentally retarded children.				
				5.18 Instruction in how to administer an education program for mentally retarded children.				
				Experience in drawing educational interpretations from—				
				5.19 psychological reports				
				5.20 medical reports (including psychiatric)				
				5.21 reports of social workers				
				5.22 cumulative educational records on mentally retarded pupils.				

6. Are there personal characteristics needed by teachers of the mentally retarded which are different in *degree* or *kind* from those needed by teachers of so-called normal children? ..... Yes_____No_____
If your answer is "yes", please list and comment. (Attach additional pages 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 the mentally retarded, and (2) the amount of teaching of so-called normal children which you have had. (Place ONE check V in *each* column on the *right* opposite the appropriate amount.)

Amount of Teaching of So-called Normal Children as a Prerequisite for Teaching Mentally Retarded Children	Minimal	Desirable	Ideal	Amount which you have had
No teaching of normal children				
At least one semester of half-time student-teaching with normal children (or equivalent)				
At least one semester of full-time student-teaching with normal children (or equivalent)				
At least one year of on-the-job classroom teaching with normal children				
At least two years of on-the-job classroom teaching with normal children				
At least three years of on-the-job classroom teaching with normal children				
Other: (Specify)				

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

Amount of Student-teaching of Mentally Retarded Children Needed as a PREREQUISITE for On-the-job Teaching of the Mentally Retarded	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	[redacted]	Desirable	Ideal	
No student-teaching of mentally retarded children							
1–75 clock hours							
76–150 clock hours							
151–225 clock hours							
226–300 clock hours							
Other: (Specify)							

EXCERPTS FROM INQUIRY FORMS FILLED OUT BY DIRECTORS AND SUPERVISORS OF SPECIAL EDUCATION IN (a) STATE DEPARTMENTS OF EDUCATION AND (b) LOCAL SCHOOL SYSTEMS, AND (c) STAFF MEMBERS IN COLLEGES AND UNIVERSITIES OFFERING SPECIALIZED PREPARATION FOR TEACHERS OF THE MENTALLY RETARDED

The Office of Education Study

"QUALIFICATIONS AND PREPARATION OF TEACHERS OF EXCEPTIONAL CHILDREN"

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

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

Miss
Mrs.

1.1 Your name Mr._____Date_____

1.2 Your business address_____

City (or Post Office)_____State_____

1.3 Your official title_____

(Specify—Supervisor of teachers of crippled children, etc.)

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

____Blind	____Gifted	____Soc. Maladjusted [2]
____Crippled [1]	____Hard of Hearing	____Spec. Health Probs. [3]
____Deaf	____Mentally Retarded	____Speech Defective
	____Partially Seeing	

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_____

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

____Blind	____Gifted	____Socially Maladjusted [2]
____Crippled [1]	____Hard of Hearing	____Special Health Problems [3]
____Deaf	____Mentally Retarded	____Speech Defective
	____Partially Seeing	

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.

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.

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 five years have completed a sequence of courses of specialized preparation?[1]

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

+	=	yes
O	=	uncertain or undecided
—	=	no

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

[1] The definition of a "sequence of courses" which appears on page 3 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 (continued)

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
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?										
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?

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

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

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
Do you believe these recently graduated special education teachers have had sufficient experience—										
4.1 in classroom teaching with normal children?										
4.2 in supervised student-teaching and observation in their specialized area?										
Do these teachers have adequate preparation—										
4.3 in developing and interpreting educational records?										
4.4 in interpreting educational and psychological reports and case histories or records?										
4.5 in making use of medical reports?										
4.6 in identifying causes of social and emotional maladjustments?										
4.7 in group intelligence and achievement testing?										
Do these teachers have an adequate understanding—										
4.8 of the basic principles of child growth and development?										

[1] A sequence of special preparation involves three 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 co-operative 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. (continued)

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
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?										
4.15 Do these teachers have an adequate basic orientation to the education of various types of exceptional children?										
4.16 Have these teachers been prepared to teach under rather ideal conditions and therefore lack the ability to work in less-than-ideal situations, such as multi-grade groupings and improvised classrooms?										

4. (continued)

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
4.17 Do these teachers tend to teach at an appropriate level and not above or below the developmental levels of their pupils?										
4.18 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?										
4.19 Do these teachers show an interest and concern for exceptional children over and above that demanded of them at school through participation in such out-of-school activities related to the welfare of these children as being active in parent-groups, national organizations, play projects, and so on?										
4.20 Do you believe that an abnormally high percentage of recently graduated special education teachers have "unsuitable" personalities and attitudes for teaching exceptional children? *Explain:*										

5. (Completed by State, Local, and College personnel.)

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
5. *Please complete the following table:*										
5.1 Indicate the amount of successful classroom teaching with so-called *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 one semester of half-time student-teaching with normal children (or equivalent)										
5.13 At least one semester of full-time student-teaching with normal children (or equivalent)										
5.14 At least one year of on-the-job classroom teaching with normal children										
5.15 At least two years of on-the-job classroom teaching with normal children										
5.16 At least three years of on-the-job classroom teaching with normal children										
5.17 *Other* (specify):										

5. (continued)

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
5.2 Indicate the amount of student-teaching with *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] One semester hour = 15 clock hours.
One quarter hour = 10 clock hours.
One academic year = 450 clock hours.

6. (Completed by State, Local, and College Personnel.)

Below are the qualifications of six candidates for positions as teachers of exceptional children. In your opinion which TWO would be the *most* likely to succeed? (Assume the personality and physical characteristics of the candidates and the calibre of professional preparation to be comparable.)

Answer, by areas, by placing *two* M's in each column you complete, according to the following key:

M = Most likely to succeed.

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

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
CANDIDATE A: A four-year *undergraduate* program completed of specialized preparation (including student-teaching with normal and exceptional children) but *without* on-the-job teaching experience with *normal* or *exceptional* children										
CANDIDATE B: A one-year *graduate* program completed of specialized preparation (including student-teaching in the specialized area) immediately following the completion of a bachelor's program in general teacher education, but *without* on-the-job teaching experience with *normal* or *exceptional* children										
CANDIDATE C: A one-year graduate program completed of specialized preparation (including student-teaching in the specialized area), for experienced regular classroom teachers holding a bachelor's degree in general teacher education, and *with* on-the-job teaching experience with *normal* children only										
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										

6. (continued)

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
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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