

ABSTRACT

AN INVESTIGATION OF THE RELATIONSHIPS BETWEEN KNOWLEDGE OF EXCEPTIONAL CHILDREN, KIND AND AMOUNT OF EXPERIENCE, AND ATTITUDES TOWARD THEIR CLASSROOM INTEGRATION

by Doris Ione Proctor

The main purpose of this study was to investigate the attitudes¹ of certain groups of classroom teachers toward classroom integration of exceptional children and to study the relationship of these attitudes to knowledge of disabilities and to kind and amount of experience in teaching exceptional children.

The acquisition of normative data about attitudes toward sub-cultural groups is needed to provide supportive information for social change. Exceptional children constitute a minority group in the public school population. Thus, research findings about attitudes of teachers toward integration of exceptional children into the regular classroom is needed for professional preparation of teachers.

¹The study is related to a larger eleven nation study of attitudes toward education and toward handicapped persons being supervised by Dr. John E. Jordan, College of Education, Michigan State University.

The research population consisted of 262 teachers on the combined staffs of 20 elementary schools in the Jackson Union School District, an urban community in Michigan. The ten schools in the sample were chosen to represent two types of school environments--five of the schools had special education programs, while the other five schools did not have special education programs. It was theorized that regular class teachers from the five schools which provided the most opportunity for contact with exceptional children and special education teacher would have significantly different attitudes toward classroom integration of exceptional children than regular class teachers from the five schools which provided less opportunity for interaction with exceptional children and with the teachers of these exceptional children.

The representative sample of 154 respondents, 139 women and 15 men teachers, represented four types of teaching positions: 120 regular class teachers, 18 special education teachers, 10 ancillary personnel and six student teachers.

The three measurable criteria employed in the study were: (a) attitude toward the educational placement of exceptional children, (b) knowledge of the disabilities of exceptional children, and (c) teaching experience with exceptional children.

The three measuring instruments employed in the study were: (a) The Classroom Integration Inventory (CII),

(b) The General Information Inventory (GII), and (c) The Personal Data Questionnaire. The first two measuring instruments were developed and validated by Haring, Stern and Cruickshank for measuring amount of knowledge and acceptance of exceptional children as expressed by teachers attending a workshop pertaining to exceptional children. The CII realism scores of the teachers represent the position of the respondents in relation to the positions taken by judges (authorities in special education) on the various placement problems presented in the CII. The GII knowledge scores represent the amount of agreement found between the answers of the teachers and the GII answers agreed upon by the judges. The personal data questionnaire was constructed and administered, along with the other two instruments, for the purpose of collecting specific data concerning type and amount of experience with exceptional children, educational background pertaining to exceptionalities of children and amount of consultation experience pertaining to problems of exceptional children.

The resulting data were analyzed by using a one-way analysis of variance test supplemented by a multiple range test modified for unequal replications.

Special education teachers and ancillary personnel were characterized by their extensive coursework backgrounds pertaining to exceptionalities of children and were significantly more realistic in their attitudes toward

classroom integration of exceptional children than were teachers reporting "some credit" in courses pertaining to exceptional children.

Special education teachers were found to be significantly more knowledgeable pertaining to exceptionalities of children than regular class teachers reporting a part-time responsibility for the educational program of exceptional children. The ancillary personnel were significantly more knowledgeable pertaining to exceptionalities of children than both the special education teachers and the regular class teachers. Teachers who gave consultations were found to be significantly more knowledgeable pertaining to the information contained in the GII test than teachers who reported receiving periodic consultations or teachers who had no consultations concerning the problems of exceptional children.

Amount of teaching experience rather than type of experience helps a teacher to achieve a more realistic attitude toward the educational placement of exceptional children. Teachers who have had the most course work pertaining to exceptionalities of children tend to approach the position of experts in the field of special education in their choices of educational placement for exceptional children.

The findings that ancillary and special education teachers give consultations, whereas regular class teachers

are characterized as receiving consultations, suggest that consultations between these groups make for similar attitudes toward classroom integration of exceptional children.

Teachers reporting a closer and more continuous type of experience, giving of consultations pertaining to one or more of the exceptionalities and an extensive amount of coursework dealing with exceptional children, were found to be significantly more knowledgeable as measured on the GII than teachers who reported lesser amounts of these background experiences.

The study provides data with which to strengthen the concept that orientation programs designed to develop knowledge and understanding about exceptional children and more positive teaching approaches to them, is an effective approach to the improvement of classroom integration for exceptional children.

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CHAPTER I

INTRODUCTION

The people of the United States, despite varying degrees of controversy over educational issues, continue to look to the schools for a better tomorrow. The strength of the nation rests upon, and is influenced by the attitudes and actions of each member of our society. The most indispensable ingredient for high-quality behavior in school children is "parents who are willing to assume responsibility for what their children do in school and who cooperate with the school in seeking solutions to problems involving the behavior of their children."

(N. E. A. Res. Div., 1956, p. 81). Although the primary responsibility for the development of a child's character rests with parents, the church and the public schools contribute in no small measure to the overall development. The present-day curriculum places emphasis on helping children to build attitudes conducive to responsible citizenship and better personal living.

Major advances in democratic educational practices have resulted in many new opportunities for exceptional children. For example, public schools have now accepted handicapped children as "at least partially" their

problem, whereas the former system classified disadvantaged children as welfare cases.¹ The United States Office of Education biennial surveys indicate an increase in local school programs for handicapped since the beginning of the century--90 percent of the children receiving special education are now in programs administered by local public schools (Mackie, 1964). This movement toward the implementation of special education programs has been national in scope. All forty-eight states, as of 1955, had enacted special legislation covering the education of handicapped children (Wallin, 1957). It has been estimated that approximately one out of four school age children in the United States is being offered special education opportunities (Kirk, 1962, p. 32).

Nature of the Problem

The impersonal, mechanistic nature of present-day society has prompted school personnel to focus special attention on the individual child. Each pupil's characteristics cut across group identifications. In every group, be it based on physical condition or academic ability, individual differences in creative talents and learning abilities are found. Usually classroom under-achievers require individual attention or special grouping

¹National Education Association, Special Classes for Handicapped Children. Research Bulletin, May, 1961, 39, 2, p. 44.

to enable them to progress toward their own particular achievement potential.

Having recognized the uniqueness of children in the classroom, many educators have already done much to adapt the curriculum to the specific needs of the individual. Recent trends in the use of individualized teaching methods by classroom teachers have prompted educators to place an increasing number of exceptional children, either on part or full time programs, in regular classes. The development of curriculum coordination and research on learning have also encouraged the current trend toward classroom integration for exceptional children. Some of the interdependent developments noted by research are:

1. The refinement of diagnostic instruments and procedures
2. The advancements in prosthetic devices for handicapped children
3. The increased number of preschool training programs for the handicapped
4. The increased training of specialists and itinerant personnel
5. The increased awareness on the part of educators of the educational, social, and emotional needs of exceptional children (Haring, 1958, p. 1).

The writer of the present study selected a specific aspect of the fifth development for special study. The media of mass communication has made the public more and more aware of rapid technological and social change. Thus, educators and social agencies do, and must work together. For example, one of the newer developments in audition is the team-served audiology clinic for the

diagnosis and treatment of hearing disorders. There is also the mobile audiometer unit, some of which are equipped to test vision. Electronic advances make possible extremely light hearing aids, thus enabling children with impaired hearing to attend regular classes. Surgical techniques and the use of drugs and diets now enable the child with a heart defect to not only survive, but to participate in school programs planned to meet his particular needs. In underdeveloped areas, medical authorities, using modern techniques, have significantly reduced the child mortality rate (Davis, 1963, p. 70). Modern medicine is saving lives of premature infants and children with acute infections (but) at the cost of permanent physical disabilities (Meyerson, 1963, p. 1). Accidents, too, contribute to the increasing number of children who must live with gross impairments in physique and/or psychological functioning. The rate of physically disabled persons is increasing. "There are more people with physical disabilities in the world than ever before" (Meyerson, 1963, p. 2).

All of these technological developments have focused new emphasis upon educational placement with teachers who have been oriented to these newer developments in education. As a result of inevitable social and technological changes educators need scientific data and information which will help develop comprehensive educational planning

for exceptional children. The increasing number of exceptional children who are eligible for regular grade placement (Haring, 1958, p. 1) has caused educators to be specially concerned with the problem of educational placement for these children. Those who participate in planning appropriate educational programs for exceptional children find it necessary to evaluate existing placement policies and practices. There is considerable differentiation in the "organizational patterns of special education programs" which, according to Mackie, (1963) are now being used in the local public school systems of the United States. She describes the programs as follows:

The array of patterns now includes full-time attendance in a special class, part-time attendance in a special class, instruction part-time by an itinerant or resource room teacher, instruction in the pupil's home, and instruction in a hospital sanatorium, or convalescent home. . . . To the extent that these are available within any one school system (or geographically convenient area) this represents opportunity for flexible placement of children according to their special educational needs. The large number of exceptional children spending part of their school day with a special teacher and part with a regular teacher implies, among other things, the need for careful coordination of the child's educational program and orientation of the regular teacher in education of exceptional children (Mackie, 1963, p. 17).

School administrators who plan to use any of the above program patterns should provide preservice or inservice programs to correct or avoid misconceptions regarding exceptional children which are typical of the culture. Cruickshank (1958, p. 107) recommends "well developed orientation programs" to help teachers "to

approach positively all types of exceptional children." This concept is supported by Haring (1958, p. 1) who states, "The success of any plan of integration depends largely upon how the teacher feels toward the exceptional child." If these concepts are observed then there is a definite need to investigate the knowledge and attitudes of teachers toward classroom integration of exceptional children. Haring (1958, p. 6) states that knowledge of exceptionalities and attitudes of teachers toward classroom integration of exceptional children are "essential considerations for investigation" before any handicapped or gifted child is placed in a regular classroom. It is an assumption of the writer of the present study that attitudes of teachers are vitally related to the emotional and social adjustment of children. It is also assumed that teacher attitudes toward pupils, parents and ancillary personnel play an important role in the learning ability of the pupils concerned. The need for research designed to uncover the attitudes of teachers who plan to teach exceptional children is expressed by Haring (1958, p. 1): "The attitudes of the regular classroom teachers with whom these (exceptional) children are to be placed present a vital consideration which has not been explored."

Because of the success of current programs to aid the exceptional child, educators are asking for information that will allow them to initiate special education programs in their locales. According to Hodgeson, (1964) there is a

serious need to uncover certain basic facts and attitudes concerning special education programs for children with exceptionalities. A recent survey shows an apparent need for communication among state department heads, special education experts and professors of educational administration to enable them to come to a better agreement concerning the responsibility of the public school for certain categories of exceptional children (Hodgeson, 1964, pp. 197-198).

Directors of vocational rehabilitation have pointed out the opportunities offered by automation for the handicapped. Although automation, in many instances, has simplified the mental and/or physical requirements of a job, there is a keener competition for the openings in such jobs (Hess, 1963, p. 156). It is important, therefore, that potential employers do not discriminate, "On the basis of the presence or absence of capacities unrelated to the requirements of the job" (Hess, 1963). Faced with the problem of inevitable change in the social-technological process, educators must anticipate the fluidity of the placement problems of the handicapped and plan accordingly. It is important that educators, social agencies and parents work closely together to influence legislative policies which will help to meet the changing needs of exceptional children.

The problem of meeting the needs of the exceptional child is international in scope. A group of Michigan State

University doctoral candidates¹ in the College of Education are addressing the problem on an international, as well as on a national, level. They are investigating the "technical, methodological, and theoretic considerations relating to the cross-national investigation of attitudes toward education and toward physical disability" (Friesen, 1966, p. 8). Jordan (1963, 1964a) states: "there are educational leaders in foreign countries and in the United States who recognize the current and expanding need for services for the disabled." Although the United States now provides special education services for approximately one and two-thirds million, it is estimated that 4.5 million more are on the waiting list (Mackie, 1956, p. 7).

The commitment of many local communities to the concept of equality of educational opportunity is prompting the use of research findings as a method to improve school practices. An attempt was made in the present study to develop research techniques which will facilitate "vertical" extensions in the collecting, processing and analysis of data in future studies. The major purpose of the present investigation was to study the relationship between knowledge of exceptionalities, kind and amount of experience with exceptional children, and regular classroom

¹The international study is under the direction of Dr. John E. Jordan, College of Education, Michigan State University.

integration of them. More specific hypotheses are given in Chapter 3.

The writer is not unaware of the danger of personal bias in a study dealing with social phenomena. As VanDalen (1962, p. 44) says, ". . . the findings in natural science lose their strength only when they are replaced by better insight into the phenomena," whereas-- "findings in the social sciences can lose their value because the knowledge they provide can cause humans to change the social condition." Incidentally, the above statement lends sanction to the assumption that knowledge affects attitudes (see p. 10). The fact that the writer of the present study is also a member of the subject matter under observation makes it impossible to be an impartial observer of attitudes toward exceptional children. It is more difficult to be objective about human reactions than chemical reactions because of the complex human relationships.

Teacher training programs emphasize "acceptance" and "understanding" as essential characteristics of a successful teacher. If it were possible to get an objective measurement of the attitudes of teachers toward classroom integration of exceptional children, then educational placement of them would be facilitated. By knowing the attitudes of a group of teachers the administration can estimate the support or resistance that will occur among the group members toward a proposed integration program

or other issue. Felty (1965, p. 2) says, ". . . the acquisition of normative data about attitudes of various 'interest groups' toward special education and rehabilitation is fundamental to 'cooperative exchanges among professionals' on the international as well as on the national level."

It would appear that a need exists for research studies designed to evaluate the similarities and differences in attitudes of specific educational groups toward the classroom integration of exceptional children. Such a study as the present one appears to be important because successful classroom integration depends upon a theory, carefully constructed and developed by research findings.

Regular classroom experience is highly desirable for any exceptional child. This was recognized in a special education report of the Jackson Special Education Planning Committee (Appendix A). It implies that classroom integration may help the exceptional child to adjust more effectively in a world of "normal" individuals. The committee also adopted the philosophy that the educational program of each exceptional child should be based on similarities to his peers rather than on his differences (Baker, 1953, p. 8). Since psychological integration is not attained by mere presence in the classroom it is of vital importance to a child's personality adjustment and educational achievement that he be placed with a teacher and peers who accept and understand him. Kirk (1962, p. 8)

points out that "The similarities in characteristics between the exceptional child and the average child far exceed the differences."

The factors which foster favorable attitudes toward children with exceptionalities need to be understood. Techniques for measuring the amount of acceptance expressed by teachers with different experiential backgrounds need to be studied and evaluated. And since physically disabled children constitute a minority group within the school population, a perusal of intergroup attitudes should provide a justification for the study of the present problem. The theoretical framework of the present investigation concerning the attitudes of teachers toward classroom integration of exceptional children has a social-psychological position. From this theoretical position the criteria for the optimal educational placement of exceptional children recommended by Haring et al. (1958, p. 4) appears to provide a very comprehensive guideline orientation. From this standpoint, regular classroom placement for exceptional children, whenever possible, appears to be more satisfactory than special school or special class placement. With this philosophy of classroom integration in mind, let us examine the criteria for integration, favored by Haring et al.

The integration of exceptional children in a regular classroom is an individual matter in all cases, and can be accomplished successfully only after a careful diagnosis and consideration of:

1. the extent to which the integrated placement can provide for the intellectual, social, emotional and physical needs of the child under consideration
2. the degree to which the exceptional child can become a contributing member of the group and compete on a fairly equal basis with the group
3. the extent to which the physical facilities of the school plant provide accessibility to the area of the building to which he must go in the routine of his program
4. the degree to which the teacher with whom the child is to be placed accepts and understands him (Haring, 1958, p. 4).

Haring et al. (1958, pp. 3-4) advocate a program of selective placement in which "regular class placement, special class placement, contact classes and resource rooms, and improved residential school programs each play an important role in the educational life of the individual exceptional child depending upon the latter's needs, capacities, and physical characteristics." In spite of the fact that all four criteria are fundamental considerations for all selective placement programs the present study is concerned with only one of the criteria--the fourth: "the degree to which the teacher with whom the child is to be placed accepts and understands him." Here is found the major point of investigation in the present study. Attitude research does involve factors subtle and difficult to measure. Although a study based on attitude change would provide criteria which could be more clearly defined and precisely measured, this particular study will be limited to the attitude similarities and/or differences for certain groups of educators. Even though the

present study was restricted to the attitudes of teachers toward classroom integration of exceptional children, the writer recognizes that classroom integration is not the best solution for all exceptional children. It must be stressed that placement is an individual matter in which knowledge and experience play important roles.

It is assumed that experience and knowledge are major determinants of attitudes toward educational placement of exceptional children within the local public school systems. This theoretical position is based on the premise that experience and knowledge are major determinants of attitudes. Thus the main focus of the present study is on the relationship among certain variables having to do with attitudes, type and amount of experience, and educational background.

As for methodology, the principal problem was one of accounting for the variables such as interpersonal relations, background in related areas, and type of experience while comparing the attitudes of two teacher groups.

The technical procedures used consisted of two distinct divisions--the acquiring of the necessary data and treatment of the data. The securing of relevant data consisted of deciding on a population, selecting a representative sample, the selection and development of appropriate measuring instruments, the availability of

the subjects within the sample, and the administration of the data-gathering instruments. The treatment of the data included scoring, organizing, processing and interpreting the results in statistical forms meaningful to educators and other personnel working with exceptional children. The main focus of the problem was to analyze the data in a way that would yield the most appropriate information pertaining to the attitudes of teachers toward classroom integration.

Statement of the Problem

The main purpose of this study is to investigate the attitudes of certain groups of classroom teachers toward the integration of exceptional children into the regular classroom and to study the relationship of these attitudes to knowledge of disabilities and to the kind and amount of experience in teaching exceptional children. The three measurable criteria to be employed in this study are:

1. Knowledge of the disabilities of exceptional children.
2. Attitude toward the educational placement of exceptional children.
3. Teaching experience with exceptional children.

The "amount of knowledge" concerning the disabilities of exceptional children will be ascertained from a knowledge scale developed by Haring et al. (1958, p. 56). The attitudes of teachers towards the placement of exceptional

children will be ascertained from the results of a classroom integration scale developed by Haring et al. (1958, p. 33). The amount of teaching experience with exceptional children will be ascertained from a questionnaire developed by the present investigator. Stated more specifically, the purposes of this study are as follows:

1. To measure the teachers' knowledge of the characteristics of children who are emotionally disturbed, gifted, mentally retarded, physically, visually, accoustically, and speech impaired. To measure the teachers' attitudes toward the educational placement of children who have the exceptionalities listed in the questionnaire (Appendix C).
2. To determine whether there is a significant difference in the amount of knowledge of exceptionality as expressed by teachers who have had more extensive teaching contacts with exceptional children and teachers who have had little or no teaching experience with exceptional children.
3. To determine whether there is a significant difference in the attitudes of teachers who have had more extensive teaching experience and teachers who have had little or no teaching experience with exceptional children, toward the educational placement of these children.

4. To determine whether there is a significant difference in the attitudes of teachers who have given consultations and teachers who have received or not received consultations, toward the educational placement of exceptional children.
5. To determine whether there is a significant difference in the amount of knowledge of exceptionality as expressed by teachers who have given consultations and teachers who have either received or not received consultations, toward the educational placement of exceptional children.

Theory (Remmers, 1950, pp. 10-13) suggests that attitudes are affected by at least two major independent variables, namely, knowledge and/or experience. It is an apparent fact that when knowledge and correct information concerning various degrees of exceptionalities are properly applied, it usually helps to change unfavorable attitudes to more favorable ones. It is assumed that attitudes are frequently changed or modified through intergroup contact or interaction. This theoretical approach suggests that people who have had an extensive or close relationship with a subgroup such as the physically handicapped will have significantly different attitudes toward this minority group than people who have had little or no contact with them.

Definition of Terms

The following terms have either a specialized meaning or need to be operationally defined for the present study.

Attitude.--The sense in which this general term will be used follows the definition by Guttman (1950, p. 51). An attitude is a "delimited totality of behavior with respect to something". For example, the attitude of a person toward Negroes could be said to be the totality of acts that a person has performed with respect to Negroes." The use of this definition is viewed by recent investigators (Felty, 1965, p. 7) as "consistent with the attempt to use some of Guttman's concepts in respect to scale and intensity analysis."

Attitude Component.--Components of attitudes have been discussed by many different investigators (e.g., Sherif and Hovland, 1961, Ch. 1; Katz, 1960, p. 168; Sherif, 1960, p. 197; Choate, 1958, p. 3; Sherif and Hadley, 1945, p. 302; Guttman, 1950, Ch. 9). A typical component discussed by these investigators is judgment. After analyzing the interrelationship between cognitive, affective, and behavioral components of attitudes, Sherif and Hovland (1961, p. 4) probed deeply into the cognitive aspect, "to consider how the individual views the issue and the way his judgments are shaped by external and internal factors." In this study the first attitude

component will be the cognitive (or knowledge) aspect, the second that of judgment (categorization reaction).

Categorization Aspect of Attitude Response.--Sherif and Hovland (1961, p. 5) maintain that, ". . . one essential aspect of the attitudinal reaction is a categorization process, whether or not the individual is aware that he is passing a judgment." Thus when an investigator solicits an expression of a teacher's attitude toward some educational issue or minority group, the investigator typically finds that, ". . . the process involves placement of the issue in a framework and assignment to a category" (p. 5). The judgment task involved in acceptance-rejection measurement requires categorization or placement of items (statements, individuals) in terms of preference of the respondents. According to Sherif and Hovland (1961, p. 9) ". . . attitude judgments are typically of the placement type, and this has definite implications for fruitful research practice in this area." The importance of the categorization aspect of attitude response to attitude measurement is described by Sherif and Hovland (1961), as follows:

Attitude measurement, whether the indices are overt behavior or, more typically, check marks on an attitude questionnaire, is based upon evaluations and categorization of the stimuli toward which the attitude is held. Thus stimulus conditions internalized anchors, motivation, prior learning, and a host of other factors affect the response obtained in the measurement (p. 1).

Disability.--Johnson (1961) differentiates between "disability" and "handicap" as follows:

A disability constitutes a physical fact--poor vision, loss of a limb, deafness; a handicap is societally determined and is a function of the situation in which the individual is placed. For example, the loss of a limb is not necessarily a vocational handicap to an accountant, deafness may not handicap an artist, low intelligence may not handicap many unskilled workers. Some disabilities become handicaps because of the attitude of the individual toward the disability, or because of inappropriate education and vocational developments (p. 54).

In this study a disability will be considered to be --"an impairment of the physical, mental, or social capacities of the individual" (Jordan, 1964). It may or may not be a handicap to its possessor.

Exceptional Children.--Since there have been various definitions for this term the one employed by Kirk (1962, p. 31) is used in this study:

Exceptional children have been defined as those children who deviate from average children in mental, physical, and/or social characteristics to such an extent that they require a modification of school practices or services in order to develop to their maximum. This definition includes both the gifted and the handicapped.

In the present study when used in reference to teacher attitudes toward exceptional children, exceptionality pertains to children who deviate emotionally, socially, physically or intellectually from the normal patterns of child growth and development to the extent that the teacher regards them as presenting one or more of the above deviations.

Exceptionality.--A term used in this study to designate the following specific areas of deviation from what is considered as normal child growth and development: (a) behavior disorder, (b) emotional disturbance, (c) impaired hearing, (d) impaired speech, (e) impaired vision, (f) miscellaneous conditions including orthopedic and cardiac, (g) seizure states, (h) sub-normal learning and (i) superior intelligence.

It is assumed that the teacher's ability to make judgment concerning individual differences will depend upon the teacher's familiarity with the two dimensions of "individual differences" given by Kirk (1962, p. 31):

Individual differences in the field of exceptional children involve two dimensions: (a) the difference between the exceptional child and the majority of children in ability or disability and (b) the differences in development within the child as represented by discrepancies in growth.

Integration.--In this study the term refers to educational integration. "In education, integration denotes a trend toward educating the exceptional child with his normal peers to whatever extent is compatible with his fullest potential development" (Frampton and Gall, 1955, pp. 2-8).

Reference Scale.--Sherif and Hovland (1961) state: "Past experience in the form of practice provides the subject with an established reference scale which affects his placement of relevant stimuli" (p. 183).

Special Education.--A term used to indicate specific educational programs planned "either in conjunction with the regular class or in a special class or school for his (a child's) maximum development" (Kirk, 1962, pp. 4-5). This definition implies that a child whose deviation is "of such kind and degree that it interferes with his development under ordinary classroom procedures" (p. 4), is regarded by the expert diagnosticians as "educationally exceptional" and should be considered as eligible for special education services. Special education services are defined by Kirk (1962, p. 32) as, "additional educational service over and above the regular school program" which "assist in the development of his potentialities and/or in the amelioration of his disabilities" (p. 32).

Type of Teaching Contacts.--Teaching contact means the same as teaching experience. The teaching experience or contact may be in a regular class, in a special class, or in a resource or itinerant teacher's class. The type of teaching contact experienced by the respondents was defined in the following terms: (a) less than one year or no teaching experience with exceptional children (none), (b) regular class teacher who shares the teaching program of an exceptional child, (part-time regular), (c) ancillary personnel who share the educational program of an exceptional child (part-time ancillary), (d) regular class teacher with full responsibility for the program of one or more exceptional children (full-time regular),

(e) special class teacher with full responsibility for educational programs of exceptional children (full-time special). Less than one year (part-time or full-time) or no teaching experience with exceptional children is designated by the term minimal teaching contact.

Teaching Experience Level.--A term used to designate the amount of teaching experience. The amount of teaching experience with exceptional children is defined as follows: (a) teacher with a "minimal" amount of teaching experience with exceptional children (N), (b) teacher with one or more years of part-time teaching experience, termed "extensive part-time" (P), (c) teacher with one or more years of full-time teaching experience, termed "extensive full-time" (F).

Academic Credit Level.--A term used to designate the amount of academic credits earned in courses pertaining to exceptional children. Three academic levels were defined as follows: (a) no special education, education or psychology courses covering some or all of the areas of exceptionality listed in the present study, (b) less than one year of credit earned in education or psychology courses covering some or all of the areas of exceptionality listed in the present study, (c) one year or more of academic credit earned in education or psychology courses covering some or all of the areas of exceptionalities listed in the present study.

Type of Consultation Experience.--Types of consultations are defined for three specific levels: (a) periodic consultations with a specialist in the area of one or more of the exceptionalities listed in this study, (b) no opportunity for consultations in the desired area or areas of one or more of the exceptionalities listed in the present study, (c) experienced in giving consultations pertaining to one or more of the areas of exceptionalities listed in the present study.

Overview of the Thesis

This dissertation is organized according to the following plan:

Chapter I. Introduction to the Nature of the Problem in this Study.

Chapter II. A Review of Related Research.

This chapter is a summarization of theory and research related to the attitudes of teachers toward classroom integration of exceptional children. The major division will include the following:

Introduction: Need for more and better research in Special Education.

Attitude formation and general nature of an attitude.

Attitude formation in relation to certain minority groups.

Attitudes of teachers and pupil attitudes.

Attitudes of teachers toward exceptional children.

Empirical research: Attitudes of teachers toward
classroom integration of exceptional children.
Measurement of attitudes.

Chapter III. Experimental Design and Procedures

This chapter includes the design, instrumentation
of the study, and a description of the statisti-
cal procedures used in the analysis of the data.

Chapter IV. The Research Results

The research results are presented and interpreted.

Chapter V. Summary, Conclusions, Recommendations and Implications.

CHAPTER II

REVIEW OF RELATED RESEARCH

The need for identifying teacher attitudes toward classroom integration as a preparatory measure to increase the accuracy of effective educational placement of exceptional children was discussed in the previous chapter. This chapter is concerned with related research and with previous studies on the attitudes of teachers toward the educational placement of exceptional children. The improvement of educational placement for these children is dependent upon the scientific verification of theoretical assumptions used in placement. Improved research is needed to provide accurate information for cooperative planning among educators for more effective educational placement for children with special needs.

Felty (1965, p. 19) reports that many researchers (Block, 1955; Kvaraceus, 1958; Levine, 1961; Meyerson, 1963) deplore the "practical nature of most special education research" and recommend that future studies should be designed "with theoretical relevance and consequently greater generality."

Specific research regarding attitudes based on judgment has been hard to obtain because researchers have tended to ignore criteria which are not easily measured in favor of criteria which can be clearly defined and precisely measured (Hatch and Stefflre, 1958, p. 255).

After a thorough review of the research, Haring (1958, p. 8) states that "published research dealing with attitudes of teachers toward exceptional children is almost completely lacking" although there is a "substantial amount of research" pertaining to "the modification of attitudes and attitude measurement." Thus, since most of the earlier studies lack specific relevance to the problem involved in the present study, this review of literature and research will concentrate on findings pertaining to attitudes of teachers towards exceptional children while at the same time including studies in closely related areas. Special concern will be given to studies which deal with the experience and knowledge components of attitude in relation to behavior outcomes.

Attitude Formation and General Nature of an Attitude

Genesis of Attitudes

The term attitude is used in everyday speech by laymen as well as by professional workers. Sherif and Hadley (1945, p. 302) indicate that attitudes are not innate . . . but learned as a result of contact with

environment. In American social psychology the term attitude has served as a "keynote" which has activated discussion as well as research (Allport, 1935, p. 798).

A perusal of the literature discloses many diverse definitions of "attitude." The fact that definitions of attitudes are not all in agreement has been evidenced by Symonds (1928, p. 239) who states that attitude is used in psychological literature with at least seven denotations: (a) drive, (b) muscular adjustment, (c) generalized conduct, (d) readiness, (e) emotional response, (f) feelings, and (g) verbal response. These diverse connotations of the term "attitude" make it advisable to analyze some of the common factors in attitude formation. The four common conditions for attitude formation are described by Allport (1935, p. 810) as follows:

1. Integration of numerous specific responses of a similar type. An infant is totally specific and fragmentary in his responses. In childhood his attitudes become gradually pieced together.
2. Individuation, differentiation or segregation. An infant has two primordial non-specific attitudes, namely, approaching and avoiding. From this matrix he must segregate action patterns and conceptual systems which will supply him with adequate attitudes for direction of his adaptive conduct.
3. Dramatic experience or trauma. It is well known that permanent attitude may be formed as the result of a compulsive organization in the mental field following a single intense emotional experience--(fears, desires, prejudices, predilections).
4. Through the imitation of parents, teachers or playmates they are sometimes adopted, ready-made. Even before he has a background of appropriate

experience, a child may form many intense and lasting attitudes toward races and professions, toward religion and marriage, toward foreigners and servants, toward morality and sin.

Although all four conditions appear to be basic conditions for the genesis of attitudes the present research is interested in the fourth condition which points out that attitudes "are sometimes adopted, ready-made" through imitations of teachers. It seems logical to assume that children sometimes adopt the attitudes expressed by their teachers because they feel that in doing so they are increasing their chances for social approval. This supposition is supported by Sherif:

Since behavior or events which an individual approves are in line with his attitude, a social attitude is similar to a motive. Thus the terms sociogenic motives, acquired drives and social attitudes are used as equivalent terms (Sherif, 1960, p. 197).

The well informed teacher does not regard "a desire to please the teacher" as the most desirable form of motivation, nevertheless a child's desire to please the teacher is often utilized as a last resort. Experienced teachers have ample opportunity to observe that the development of desirable social attitudes in their pupils is a gradual process. As already noted from Sherif and Cantril (1945, p. 302), attitudes are not innate but are learned through contact or interaction with something in the environment. In the Sloan experimental study (Boyd, 1943) it was found that unless attitudes have "become established to the point of awareness, they can not be measured

by the endorsement of attitude statements" (p. 10). Thus Boyd (1943) defines attitude as "the emotional acceptance (or rejection) of a situation" (Boyd, 1943, p. 10). Among the various meanings which have been assigned to attitudes Boyd (1943, p. 8) has detected two "rather well-defined viewpoints: one viewpoint holds that attitudes can be defined only in terms of overt behavior" and the other "that attitudes may exist emotionally without being evidenced through overt behavior." The fact that attitudes may be defined in accordance with the latter viewpoint is verified by a recent doctoral study dealing with aspiration, attitudes and concepts of two sharply contrasting groups of children. In this study, Choate (1958) analyzed Allport's classic definition and Sherif and Cantril's observation of "effect of attitudes" and decided that:

An attitude . . . is the way an individual is disposed to act toward something as a result of previous experience. It is dynamic in quality and influences further action. It may be negative, and it may vary in intensity (Choate, 1958, p. 3).

Since social attitudes are learned relative to something (stimulus or stimulus class) in the individual's environment it would appear that there is always a subject--object relationship. The positive or negative values which the individual attaches to statements, persons or groups are results of the interaction. The attitude, dynamic in quality, tends to move in a referential direction along a continuum toward positive versus

negative, favorable versus unfavorable, approval versus disapproval, trust versus distrust, etc. The outcome of the interaction between a person and others is described by Sherif (1960, p. 196) as an experience in which desires to be accepted, to belong, to amount to something, play a crucial part. "Thus a major source of the content of social attitudes is the values and norms of the individuals reference groups" (p. 196).

In summary- it has been accepted that attitudes are organized reactions of an individual towards something in his environment as a result of previous knowledge and experience with the object.

Attitude Formation in Relation to Certain Minority Groups

Personal Contact

Homans (1950, p. 112) suggests that the more frequent the contact between individuals or groups, the more favorable or unfavorable the attitude.

Allport (1958, pp. 250-268) reviewed research on intergroup contact and concluded that "equal status contact" creates more favorable attitude when the contact is related to common interests (p. 367). Casual contact is not only unpredictable in its effects but may tend to reinforce adverse stereotypes (p. 252). Status was also found to be significant. In studies of attitudes toward Negroes, those having contact with high status Negroes

held more favorable attitudes toward them than those having contact with lower status Negroes (pp. 254, 261-262).

A Newsweek (Oct. 21, 1963, p. 50) poll indicates that whites having more contact with Negroes or who have known Negro professionals held more favorable attitudes than whites who had never known a Negro socially or whites who had contact with only low status occupational group Negroes. This poll taken for the purpose of investigating racial prejudice shows that "the more white Americans get to know Negroes, the better they get along together, whites who have social contact with Negroes consistently responded more favorably to the Negro and his cause" (p. 57).

The concept that a group of teachers who have concurrent experiences with exceptional children are more receptive to learning about and understanding these children than teachers who are not having personal contacts with exceptional children emerged from an experimental workshop study by Haring et al. (1958, p. 130).

The foregoing research suggests that personal contacts with a subgroup tend to be more favorable when contacts with members are frequent and are with subgroup members of a higher status. Contact stimulates interest in subgroups.

Minority Status of Exceptional Individuals

After a careful review of research on psychological theory Felty (1965, p. 5) reports that theory indicates

that the amount and kind of interpersonal contact with a subgroup are determinants of attitudes.

Tenny (1953, p. 260) describes the physically handicapped as members of a minority group similar to other minority groups--seeking education, jobs and acceptance.

In his study of public attitudes toward the disabled Roeher, (1961, p. 69) reports that societal attitudes toward the physically disabled are similar to those which other minority groups face, such as, social distance; "slapstick" humor; segregation, particularly in schools, and vocational disadvantage (p. 69).

Cowen et al. (1958, p. 300) found that, "contact or lack of contact with the blind does not relate significantly to verbalized attitudes to blindness." He also found "significant correlations between negative attitudes to blindness, and Anti-minority, Anti-Negro, and pro-authoritarian attitudes . . ." (p. 304).

Some authorities (Tenny, 1953; Roeher, 1961) designate the negative attitudinal reactions of society toward its disabled members as one of the principal limitations imposed upon the handicapped person. Roeher (1961) noted that, "certain persons, for example, with slight disabilities became totally dependent and resigned to an unproductive life, while others with greater physical disabilities achieve independence and frequently an unusual degree of success (p. 66).

Self-Concept

It is the view of competent authorities that conscious recognition of difficulties accumulating along with a handicap will open paths to acceptance (Fusfield, 1953, p. 14). It has been found that stutterers are often helped by self-analysis and an objective attitude toward their problem. An improvement in speech in turn tends to promote a more favorable attitude toward self. This concept is strengthened by the following statement by Milisen:

The correction of a misarticulated sound not only improves the quality of the speech, but it also produces constructive changes in attitude in the child and in his environment, this facilitates the therapist's efforts when dealing with the remaining sounds . . . establishes a learning pattern (Milisen, 1954, p. 16).

An objective attitude toward his problem enables a person to investigate his limitations and capacities. In clinical work it has been observed that the attitude which the client holds toward himself can either retard or accelerate the rehabilitation process. Cholden (1958) feels that more information is needed concerning how people acquire the desire to change because "all rehabilitation is based on emotional and motivational states. The attitudes the person holds toward himself and his affliction form the groundwork for any movement toward relearning and readjustment we call rehabilitation" (p. 83).

An increased interest in "theory of ego" and the importance of self-image to personal adjustment permeated

the development of non-directive counseling methods which emerged in the 1940's. Theories of personal adjustment continue to stress the importance of self-image and self-acceptance . . . (Gaddes, 1959, p. 200).

Brookover (1962, p. 72) states that "a student's self-concept of his own ability is positively related to the image that he thinks others hold of him when the significant others are teachers, peers and parents."

Peer Group

Special educators are aware of the importance of helping regular class pupils to gain enough understanding to create an atmosphere of acceptance toward "handicapped children" with whom they have contact. The need of a handicapped child to be understood by his peers and teachers is recognized by the National Foundation for Infantile Paralysis (1956) which has carried on an educational project to foster understanding of disabled children.

A study by Force (1956, p. 68) reveals that few physically disabled children have enough personality assets to negate the effect of being labeled handicapped by normal peers. He did find, however, that "the individual physically handicapped child who is highly accepted by a peer group manifests many socially desirable traits and relatively few negative traits of behavior patterns" (p. 68).

In his sociometric studies, Jennings (1959, p. 1) found that "the social atmosphere is very largely created and maintained by pupil interaction, and this can be constructively influenced by the tone the teacher sets and the grouping practices she uses." Recent research contains data which "indicate the importance of supportive peer group relations for pupil self esteem, attraction to school tasks and the utilization of abilities" (Fox et al., 1964, p. 109).

Jones (1966) conducted a study on social distance of exceptional children at the high school level and found that acceptance of certain exceptionalities was often related to interpersonal situations. Most frequently the severely mentally retarded anchored the unfavorable end of the acceptance continuum whereas the gifted anchored the favorable end.

The most pertinent findings concerning attitude formation in relation to certain minority groups is summarized as follows:

1. Attitudes tend to be modified by the type and amount of personal contact with members of the minority or subgroup (Homans, 1950; Newsweek, 1963).
2. Attitudes tend to be more favorable when the contact is with subgroup members of a higher status (Allport, 1958).

3. Attitudes toward the disabled are similar to the attitudes expressed toward other minority groups (Tenny, 1953; Roeher, 1961).
4. Attitudes of society toward the disabled may place a greater limitation on the individual than the disability itself. This finding bears a close relationship to the fact that, "student's self-concept of his own ability is positively related to the image that he thinks others hold of him when the significant others are teachers, peers and parents" (Brookover, 1962, p. 72).
5. Self esteem is related to "supportive peer group relations" (Fox et al., 1964, p. 109).

Relevant findings, such as those listed above, in the review of literature suggest that special attention should be given to research results dealing with the type and amount of experience (personal contact) with exceptional children in relation to attitudes of educators toward them. Special attention will also be given to knowledge and understanding of exceptional children in relation to attitudes of educators toward them.

Before reviewing the research on the attitudes of classroom teachers toward exceptional children, however, some pertinent information concerning the general relationship of teacher and pupil attitudes was examined. In

addition to this general information concerning the importance of teacher attitudes to pupil behavior, an extensive investigation was made to discover some specific research findings concerning the relationships of knowledge and experience to attitudes.

Attitudes of Teachers and Pupil Attitudes

Thurston (1928, p. 531) points out that early and initial concepts often form the bases of attitudes so that by the time pupils enter secondary school they have inclinations, feelings, prejudices and biases about many specific topics. According to Dewey (1922, p. 108), "ways of belief, of expectation, of judgment, and attendant emotional disposition of like and dislike, are not easily modified after they have once taken shape." In spite of these findings, however, there appears to be considerable current interest among educators in the role of teachers in modifying pupil attitudes.

Many workers have reported that teacher attitudes are reflected by their pupils. The degree to which teacher attitudes toward the Negro are reflected in pupil attitudes was investigated by Manske (1936, p. 44) and it was concluded that "teachers who believe in indoctrination tend to indoctrinate."

Cummins (1960) reports a significant relationship between teacher acceptance of self and others and students' acceptance of self and others' attitudes. The measuring

instrument used was the Index of Adjustment and Values (Cummins, 1960) and a teacher role concept Q sort developed on a continuum from accepting-permissive to rejecting.

Attitude and Teacher Behavior

Torrence (1960, p. 97) and Ryans (1960, p. 146) found data to support a hypothesis that there is a relationship between "certain teacher behavior, as assessed by trained observers, and teacher attitudes" (p. 146).

Flanders (1965, p. 117) found that pupils learn more from teachers who clarify goals by an indirect rather than a direct teaching approach. Conclusions from the 1956-57 Minnesota and New Zealand studies indicate that "teacher behavior exerts more effect on pupils' attitudes than pupil behavior exerts on teacher influence" (Flanders, 1965, p. 65).

Knowledge

Nelson (1939) summarized the literature on attitudes and concluded that several factors affect the development of attitudes: intelligence, age, home influence, unemployment, majority opinion, group influence and interstimulation, communities and geographic location, books, periodicals and financial status. The studies presented were in fair agreement with the following statement: "Information seems to reduce prejudice and increase tolerance toward other races and toward such issues as the amount of freedom to be allowed children" (p. 425).

Some of the studies (1939) contained evidence that "radical teachers do have measurable effect on student attitudes, that courses in psychology, sociology and other fields may actually modify certain student attitudes" (p. 426).

The present discussion is concerned with the "intelligence" and "information" factors listed above since they are obviously related to knowledge. One needs intelligence to discriminate and select needed information for problem solving. The relation of attitudes to the psychology of perception and judgment are reviewed by Sherif and Cantril (1945):

The main points of anchorage in basic psychology of an attitude: The first stage in formation of attitudes is the perceptual stage. Because of this and because of the discriminative nature of attitudes they are closely linked to the psychology of perception and judgment. The laboratory studies on one hand, and historical and empirical facts of everyday life on the other, reveal that perceptions are selective. Perceptual and judgmental activities take place in referential frameworks. As a consequence of facing repeatedly the proportions, forms, or perceptual objects, scales of magnitudes (both in a physical and social sense), these scales and magnitudes form frames of reference in the individual which serve as bases by which subsequent situations are perceived and judged, they need not be consciously formed, deliberately instructed or imposed by others. Once formed they act as anchorages to determine or alter an individual's reactions to subsequent situations. In this fact is imbedded the basic psychology of an attitude" (p. 314).

Kvaraceus (1956, pp. 328-331) investigated the attitude of professional workers (mostly teachers) toward disabling conditions in relation to knowledge of the various

disabilities. Results showed that teachers prefer to teach those groups of disabled about whom they have (or believe they have) the most knowledge.

Haring et al. (1958) found that, "increased knowledge per se was not found to be a significant factor in effecting modifications of teachers' attitudes toward exceptional children" (p. 130). On the other hand, however, these investigators found that a workshop designed to modify attitudes of teachers toward exceptional children was more effective when teachers had "classroom experiences with exceptional children concurrent with a workshop . . .". This particular finding suggests that an interaction between information (knowledge) and experience, in relation to attitudes toward a minority group, is possibly more crucial when the information presented to the subjects is designed to bring about a change in beliefs. The assumption that past experience with a stimulus object affects one's judgment of the object is verified in the following paragraph:

Learning, i.e., the conditions and extent of past experience with the stimulus material, is an important determinant of the nature of an individual's judgment scale and his placements of relevant stimuli. This is shown most clearly in the experiments of Tresselt, where the placements of weights by subjects (such as professional weight lifters) having prior experience with heavy objects or by subjects with differing amounts of practice in the experiment were markedly different from those of subjects lacking such prior experiences. Past experience in the form of practice provides the subject with an established reference scale which affects his placement of relevant stimuli (Sherif and Hovland, 1961, p. 183).

The complex relationship that appears to exist between knowledge and experience is indicated in the fact that an individual's placement of an attitude-related item on an attitude scale is dependent upon both knowledge and the stimulus conditions surrounding the formation of the attitude.

If the above explanation of the psychology of attitudes is true it would appear to the present investigator that knowledge affects attitudes. Choate (1958) states that, "Attitudes . . . are the result of perceptions upon which judgments are made on the basis of reference which, if not already present, is soon built up by the individual or group. Changing one aspect of the frame of reference will affect the attitude. Judgment may be affected by knowledge and, in some cases by need" (p. 3). Knowledge serves to establish and to build a frame of reference. The importance of "frame of reference" to attitudes is explained in the words of Cantril (1941):

. . . the components of various individuals' mental contexts are organized into systems that vary in their completeness of integration. Furthermore, the organization of the mental context within a single individual may change radically with his experience and education. Some people have comparatively few standards of judgment which furnish the basis for a limited number of generalized frames of reference. But these few frames of reference in turn, can lead to a host of highly consistent attitudes" (p. 25).

Experimental evidence indicates that, "the individuals' judgment of stimuli is considerably affected by his

attitude toward the stimuli being judged" (Sherif and Hovland, 1953, p. 135).

Since "the first stage" in the formation of an attitude is a perceptual one, attitudes can be inferred from the "selective nature of the response (Sherif and Cantril, 1946, p. 24). Perhaps this is what Choate (1958, p. 3), has implied in her statement that whenever a judgment follows a perception, on the basis of reference, an attitude is born.

Instruction

Haring (1958) reports that, "By far the greatest amount of research reports the use of instruction in some form or another as a means for modifying attitudes" (p. 13). Some of the studies (Manske, 1936; Haring, 1958, p. 13) indicate that effectiveness of instruction in modifying attitudes depends upon the effort of the instructor to indoctrinate.

Knowledge of principles of educational psychology, child development, and child behavior are significantly related to teacher attitudes as measured on the Minnesota Teacher Attitudes Inventory (MTAI) in a study conducted by LaBue (1959, p. 433). To a great extent, "the attitudes of a person toward objects, persons, and processes have been shown to be dependent on the amount and quality of information he possesses with respect to them" (p. 433). The importance of knowledge of a disability to the amount

of acceptance one has for persons having that disability is stressed by Murphy (1960):

Any procedures that will meaningfully aid all to better understanding the individual with a visual impairment need to be used. The problem is complex, although the operational premise is (perhaps deceptively) simple: It is that knowledge fosters comfort. The more one feels knowledgeable about a disability, the more inclined he is to move toward, be with, work with persons having that disability; granted that the bedrock determinant of rejecting or accepting attitudes will be the emotional dynamics of the reacting one, rather than the amount of information that person possesses. While in human relationships attitudes are more important than facts, if sound positive attitudes are to evolve they will do so more readily when there is familiarity with the facts (p. 161).

The fact that educators have been known to "express their feelings of acceptance and rejection . . . on an emotional level without a particular regard to (knowledge about) the most effective placement for children with exceptionalities" was demonstrated in an experimental workshop designed by Haring et al. (1958) to modify the attitudes of teachers toward exceptional children. The latter findings need to be given careful consideration since they contain evidence to verify the assumption that attitudes may be emotionally toned.

Russell (1953) reviewed the literature on the development of thinking processes in which attitudes is listed as one of the motives for thinking; the other motives listed are feelings, needs and habits of thought which operate to "initiate and determine the direction of thinking." When a person directs his thought toward an object, thing,

or idea, it is commonly assumed that he is interested in the object, thing, or idea. The fact that interest is closely related to attitude is explained by Dewey:

When we speak of a man as interested in this or that the emphasis falls directly upon his personal attitude. To be interested is to be absorbed in, wrapped up in, carried away by, some object. To take an interest is to be alert, to care about, to be attentive. We say of an interested person both that he has lost himself in some affair and that he has found himself in it. Both terms express the engrossment of the self in an object (Dewey, 1916, p. 148).

In an experimental study designed to determine the effect on group performance of "an indifferent and neglectful attitude" expressed by one member of the group, Rosenthal and Carter (1948) found that, "if a group member behaved with indifference and neglect, the attitudes of the group members shifted significantly in the direction of disbelief in goal attainability and of disbelief that other group members would whole-heartedly participate to achieve the goal" (p. 577). The results of this study furnish some evidence that group purposes need to be shared by all of the members to enhance the end results. Sociometric studies in group relations show that, "Even six-year-olds have been known to plan and discuss intelligently, or to analyze together under guidance what they may be doing to hurt some other child's feelings" (Jennings, 1948, p. 7). Most educators know that children do not develop social skills automatically since it is generally assumed that experience and knowledge help to build social

responsibility. Jennings (1948) states that, "Mere physical proximity does not necessarily make a psychological group. Experience to promote such ends need to be planned for" (p. 7).

The concept that attitudes are learned, that they are often emotionally toned and may be favorable or unfavorable appears obvious to the present investigator and, no doubt, to the reader of the present research study. The present research has presented sufficient information to support the assumption that experience and knowledge are two of the most effective methods for the modification of attitudes. Therefore, it would appear logical to select both experience and knowledge factors as two outstanding determinants of teacher attitudes toward their pupils.

Experience

Rabinowitz and Rosenbaum (1960) report the results of a study which attempted to measure changes in teaching attitudes that accompany experience. The sample included 1628 student teachers, all seniors attending four municipal colleges in New York City. The measuring instrument, the Minnesota Teacher Attitude Inventory (MTAI), was administered a second time after an interval of three years. The first responses were made when the subjects were student teachers; the second responses were made when the subjects were teachers employed in the elementary schools. The items selected were chosen as representative of

attitudes of "teachers who had rapport with children and teachers who lacked rapport" (p. 313). Out of the 1323 respondents there were 343 usable inventories or 72 percent of those to whom the MTAI had been sent. The F ratio for differences between colleges was 7.97 ($p < .001$) which is highly significant. It was concluded that there were real differences between the mean MTAI scores of subjects from the four colleges. The F ratio for administrations was 198.53 ($p < .001$) which is also highly significant (p. 35). The decline in mean MTAI score over the three year interval between test administration cannot be attributed to chance. The interaction of colleges and administration was not significant; therefore there was no evidence to indicate that MTAI scores were modified differently by teaching experience (p. 35). The investigators (1960) concluded that, "The decline in score (regarded as a deterioration in attitudes that are associated with ability to establish rapport with pupils) can be attributed to two factors: response set changes and an increased emphasis on limits and standards. . . . The change in attitudes may indicate a realistic adaptation to the demands of classroom life" (p. 319).

The study presented above provides data which gives reason to doubt that teaching experience improves teacher rapport with pupils.

It is quite apparent that educational placement of the gifted has been an educational issue in the public

schools. Because of a concern for the attitudes of the staff towards organized classes for the gifted, Justman and Wrightstone (1956) employed the questionnaire method to determine the attitudes of teachers in four schools in which IGC classes had been operating for at least five years (p. 141). The questionnaire called for acceptance of a series of 30 negatively phrased statements arranged on a five-point scale--strongly agree, agree, undecided, disagree, and strongly disagree. Each teacher was also asked whether IGC classes should be retained or abolished (p. 141). The results of the study (1956, p. 142) revealed a significant relationship between years of teaching experience and specific experiences with IGC classes. The implication to the investigators was: ". . . length of service is a factor in placement of teachers to IGC classes" (p. 142). "In general, the greater the number of years of service reported . . . the greater the tendency to vote for abolition of IGC classes" (p. 143). Of special relevance to this study was their (1956) finding that teachers who had actually been assigned to IGC classes tended to vote that they be retained; teachers who had never had experience in teaching IGC classes tended to vote for the abolition of the IGC groups (p. 143).

Attitudes of Teachers Toward
Exceptional Children

Acceptance

The importance of teacher acceptance to the exceptional child is discussed by Cain (1949, pp. 275-279) and Major (1961, pp. 328-330). Cain points out that "many forward looking schools" attempt to provide integration services which aim to obtain "an understanding on the part of all teachers of the problems of the handicapped child being educated in their respective buildings."

The Forty-Seventh Yearbook of the National Society for the Study of Education (1948, I, p. 238) recommends a good mental hygiene approach because the attitude of the teacher is considered to be important to the personal adjustment of the exceptional child. In a discussion of what can be done to promote social acceptance and psychological integration of exceptional children, Dunn (1963) makes the following statement:

The attitudes fostered by the administration among faculty, pupils and parents and the ingenuity exhibited in solving the problems involved, constitute approaches that can produce both social acceptance and psychological integration (Dunn, 1964, p. 41).

Johnson and Kirk (1950) in a study designed to determine whether mentally handicapped children are segregated in the regular classroom found that although these children are physically present in the school system they may be psychologically segregated as compared to their normal peers.

Teaching Preference

Teachers who have an educational speciality (e.g., speech correction), usually designate children within that area as the most preferred area of exceptionality to teach (Dickenstein and Dripps, 1958; Murphy, 1960; Blatt, 1956).

Haring et al. (1958, p. 14) found teachers to be less accepting of the handicapped than they were toward non-handicapped children.

These studies do not indicate whether preference to teach a certain group of exceptional children is associated with a more favorable acceptance ranking. A record to show the extent of the teachers' contact with exceptional children would also be desirable. [It is quite evident that knowledge of and experience with exceptional children are closely associated with the acceptance-rejection attitude for teaching certain groups of exceptional children expressed by the teachers.]

Understanding Exceptional Children

The fact that the needs of exceptional children differ from that of their normal peers has been verified by various investigators. Wrightstone (1957) reports on a study which focused upon a comparison of the adjustment of handicapped and non-handicapped children in New York City (grades 6-8) to school, to society and to self. A battery of tests designed to obtain objective measurements of intelligence, general personal--social adjustment and academic

achievement were administered to each child. Data concerning class adjustment, work habits, progress in classroom subjects, number of schools and types of classes attended, subject marks as well as results on group tests administered by the school, were obtained through a study of the child's record and teacher interview. A personal interview was also given to each child to determine attitudes toward school, special class, teacher, classmates, self, orthopedic illness, vocational and school ambitions, hobbies and interests, and friends (p. 160).

A survey of these classes was taken by means of observation and an instrumental checklist which emphasized three aspects of the total classroom situation: (a) physical features of the classroom and building, (b) classroom climate, and (c) instructional practices and materials.

Some of the findings of the Bureau of Educational Research in this study (Wrightstone, 1957) indicate that orthopedic teachers, as a group, find that handicapped children do not achieve at the same level on a standardized intelligence test as non-handicapped children. They also found more evidence of emotional disturbance among the disabled, who were found to be more immature and egocentric than the average adolescent and to be less able to deal constructively with their problems. The investigators concluded that there is need for more teacher

education concerning the problems of handicapped children (Wrightstone, 1957).

The latter study provides evidence of the need to promote research which may be utilized for the coordination of programs set up to educate exceptional children. Some of the problems pointed-up by the investigators were: the wide range of age; need for an evaluation team; need for more teacher education, and need for more physical examinations. The finding that is of most importance to the present research is the "need for more teacher education" pertaining to the education of exceptional children. Theories of personality adjustment and behavior theories have been probed for leads to a better understanding of the adjustment of children with various types and degrees of exceptionality (Dunn, 1963, Ch. 10). Among some of the findings pertaining to exceptionality and adjustment are the following:

Exceptional children tend to have more adjustment problems than do normal children. Nevertheless, it is evident that a wide range of potential for adjustment prevails among individuals with exceptionalities of all types. No simple one-to-one relationship exists between poor adjustment and degree of deviation on mental, physical, or social continua. Efforts to understand adjustment in terms of a single factor seem to contribute little useful information. Evidence indicates that environmental factors interacting with physical or mental deviation have a profound and complex relationship to adjustment (Dunn, 1963, pp. 550-551).

Empirical Research--Attitudes of Teachers
Toward Classroom Integration of
Exceptional Children

Dickenson and Dripps (1958) by the use of a rating-scale technique did an analysis of the acceptance-rejection attitudes of several groups of youth specialists toward the following categories of exceptional children: (a) visually handicapped, (b) mentally retarded or slow, (c) emotionally disturbed, (d) physically handicapped, (e) hearing handicapped, (f) gifted and talented, (g) speech disorders, and (h) delinquents.

The purpose of the problem investigated by Dickenson and Dripps (1958) was to ascertain whether different childhood worker groups vary in attitude toward exceptional children and to determine whether certain categories of exceptionality tended to be more accepted (or rejected) than other types.

The sample was composed of 100 freshmen teachers-to-be, 100 regular elementary teachers, 32 principals, 46 special educators and 31 speech therapists. These groups were chosen because they all had direct contact with children in their work and the investigators held that the extent to which adults react to handicapped children should have some implications for education in general. They theorized that a clarification of group attitudes toward handicapped children should, "increase our efficiency in dealing with these children" (p. 2).

The rating scale adapted for this study (Dickstein and Dripps, 1958) was developed by Kvaraceus (1956) and reported in an article in the May, 1956 edition of Exceptional Children. Dickstein and Dripps (1958) confined their study to the same eight categories with which the Kvaraceus study was concerned plus eight separate categories of speech and hearing disorders; the latter segment of the investigation was the distinct contribution of these investigators. Each respondent was asked to indicate:

1. Which type of exceptional child he would most prefer to teach.
2. Which type of exceptional child he would least prefer to teach.
3. Which type of exceptional child he felt he knew most about.
4. Which type of exceptional child he felt he knew least about.

In general, the tendency was for all workers to most prefer to teach those categories about which they felt that they knew the most (Dickstein and Dripps, 1958, Ch. IV). The regular classroom teachers felt that they knew most about the gifted and their preference for teaching the gifted group far exceeded the next most preferred group. Teachers felt they knew next most about slow learners and the emotionally disturbed. The emotionally disturbed group tied with physically handicapped and speech handicapped as the classroom teachers' next preferred groups to teach (Ch. IV).

Regular classroom teachers felt they knew least about visually handicapped and next least about the delinquent. They felt that they least preferred to teach the delinquent, the visually handicapped and the hard-of-hearing.

In ranking the eight separate categories of speech and hearing disorders the classroom teachers indicated that children with articulatory disorders were the most preferred group to teach. The next most preferred group was children with voice disorders. Among the speech and hearing disorders the regular classroom teachers least preferred to teach children with cerebral palsy, cleft palate, and hearing impairments.

In their analysis of the data the investigators (1958, Ch. IV) found that certain groups of exceptional children tend to be rather consistently preferred or not preferred. The gifted appeared to be generally preferred whereas the delinquent, visually handicapped, and hearing handicapped were generally least preferred.

Critical Analysis of Dickstein-Dripps Research Study

The respondents appear to have similar educational background in that they were all educators or teachers-to-be (Freshmen). It is apparent that the participants in this study were not equally experienced in teaching and that many of them did not have any teaching experiences with exceptional children. Their amount of

knowledge concerning exceptional children, according to the ratings used in the study, did not have as much consistency as the most-prefer to teach category. The present writer questions the validity of a teacher's or principal's rating of themselves on "know most about" a certain area of exceptionality. The investigators also do not show that the validity and reliability of the data gathering instruments have been established.

The method used for drawing their sample was not clearly defined. If the samples used are representative of the population the investigators do not explain so. Neither do they indicate whether or not each of the groups was randomly chosen from a larger population.

Although the size of the samples of groups are given, the investigators do not furnish any background concerning the community populations--the presence or absence of exceptional children in the various schools from which the participants were chosen. The amount of contact of the various participants with various kinds of exceptional children might be a crucial factor in the amount of acceptance-rejection expressed by the participants towards these children.

There are various other factors such as the age of the participants, the number of years taught, special education background and contact with exceptional children which might affect the distribution of attitudes on a continuum. It would appear that their control variables

are not adequately identified even though they have been very careful to describe the research procedures in detail. The level of significance necessary for the rejection of the hypothesis was not specified--perhaps because the hypothesis itself was not clearly presented.

The Dickstein and Dripps (1958) study suggests that a study be conducted which is designed to determine specific factors such as knowledge and experience involved in the rejection of children with obvious physical disabilities.

Empirical Research on Attitudes of
Educators Toward Exceptional
Children

A research study by Haring, Stern and Cruickshank (1958) has demonstrated the value of well developed orientation programs for in-service teachers who want to learn to make a positive teaching approach to all types of exceptional children. It appears to be by far the best designed piece of research on the attitudes of teachers toward classroom placement of exceptional children that has been published to date.

The general purposes of the investigation were:

- (a) "to determine the extent to which the attitudes of classroom teachers can be modified toward greater and more realistic acceptance of exceptional children" and
- (b) to utilize a workshop for the purpose of modifying attitudes in the direction of a greater amount of knowledge and understanding of exceptional children. The

study has two specific purposes: (a) to ascertain the initial status of attitudes toward, and the amount of information about exceptional children, and (b) to re-test, after a thirty-week workshop period, to determine the effect of the workshop in modifying attitudes and understanding of exceptional children (pp. 19-20). It was hoped that the workshop would also help the teachers to be more expressive of personal feelings after fifteen three-hour sessions together. The entire staff of four selected schools participated in separate workshop programs developed for the members of each school staff in their own building. Administrators and non-professional workers were among the participants in the workshop. In fact, the only criterion insisted upon by the workshop directors was that the entire staff of the schools participate in the workshop.

Each of the fifteen workshop sessions lasted three hours. The first part of the meeting consisted of lectures by specialists and discussions led by consultants pertaining to the best that was known about a given exceptionality. Constructive information was made available with particular emphasis on the part of the consultants to correct misconceptions and "old wives' tales" about the particular type of exceptionality that was being explored (p. 22).

The second part of the workshop period was left as nonstructured as possible. The group was divided into

several small groups with a nondirective leader. Regardless of status at school, academic rank was ignored and all participants were free to take part in the discussion on an equal basis. It was believed by the directors of the workshop that, ". . . if teachers expressed whatever negative feelings they might have, new insights might occur which in turn would increase attitudes of acceptance" (p. 24). The goal of the workshop was to develop healthy attitudes toward exceptional children in the minds of all members of the school personnel who might be having contacts with exceptional children and/or be able to give support to special educators. Reference material concerned with exceptional children, which was recommended by the consultants to be "a cross-section of the best thinking and most valid research available at the time," was placed in each of the four schools (p. 26). Orientation meetings were held for the administrators, consultants and discussion leaders prior to the workshop meetings. Discussion leaders were urged to provide "an atmosphere of acceptance" which would serve to ventilate any possible hostile feelings or misunderstandings the members might have (p. 23).

At the beginning and at the end of the thirty-week workshop period several sessions and many hours were spent in the collecting and processing of objective data. These measures revealed valuable information concerning

each participant's general knowledge about exceptionality, and his initial attitude toward exceptionality. The battery of tests given also yielded important information about the personality of each participant, as well as many important characteristics of the group. After the group had been subjected to the "influence of the workshop" (treatment) for fifteen sessions the tests were repeated. The results gave evidence ". . . that teacher attitudes were modified as a result of the workshop in the direction of increased acceptance toward pupils classified as exceptional" (pp. 128-129). It was of particular interest that the evidence of change and growth which could be attributed to the workshop experience was "particularly true for the participants from those schools already providing teaching experiences for exceptional children" (p. 129). It was also of special interest to the present research to note that the teachers who appeared to have an increased amount of emotional acceptance for exceptional children did not demonstrate, ". . . a particular regard to the most effective placement of children with exceptionalities" (p. 129).

✕ An analysis of the pre-test and the post-test results obtained through the administration of the five tests listed below furnished the basis for determining the extent to which the understanding and attitudes of the teachers and administrators changed (effect) after having

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experienced the various kinds of workshop activities (treatment). The instruments were: (a) the General Information Inventory, (b) the Classroom Integration Inventory, (c) the Activities Index, (d) the Picture Judgment Test, (e) the Critical Incident Test (p. 20). These five instruments were selected to give what is termed by the authors (Haring et al., 1958) as a "multidimensional approach" in making an assessment of attitude change. The General Information Inventory, the Classroom Integration Inventory and the Critical Incident Test are of particular interest to the present writer because they center around the exceptional child. The GII and CII are described in detail in Chapter III (pp. 92-104). "The Critical Incident Test was a straight-forward technique which asked the subject to cite any way in which a certain experience had influenced his behavior" (p. 57); thus it served to validate the findings on the GII and CII.

Attitudes in Relation to Personality Structure

Haring et al. (1958) used the Activities Index for tapping some of the "more grossly functioning aspects of behavior" (p. 20). He (p. 47) relates some interesting findings derived from previous administrations of the Activities Index to graduate students in physics, teacher-training and theology. "Teachers and theologians . . . emphasized activities involving mature interrelationships

with other people. For the teachers the concern with interpersonal activities was coupled with an interest in providing nurturant support for others" (p. 47). They (1958, p. 47) also found that teachers exhibited less "personal introspectiveness" than the other two groups. The version of the Activities Index adopted for use with Haring's (p. 48) workshop was the first of two revisions designed to facilitate quantitative analysis. The Activities Index proved to be more meaningful than the Strong or the Kuder tests "when broken down into its individual needs component" (p. 51). The teachers were given the Activities Index both before and after the workshop. A vector analysis was carried out by means of Hotelling's t . Difference scores were obtained by subtracting post-test from pre-test scores. A matched-pair t test was done for the total group and for each of the four schools individually. The differences noted between the pre-testing and post-testing suggested a resistance to the workshop materials which was consistent with withdrawal characteristic noted in the vector analysis.

The findings from the Activities Index given to teachers from all four schools showed a characteristic pattern of "extreme personal reserve" (p. 89). Although the investigators intended that the workshop would affect "the personality structure of the teachers toward a greater expression of personal feelings . . . the teachers

as a total group moved in just the reverse direction." The results appeared to imply "a rejection of the workshop itself" (p. 89).

The investigators, Haring et al. (1958, pp. 89-100) obtained analyses of variance on the four schools to see if one or two of the schools did show a significantly greater release of personal feelings. Findings from the results of the data indicated that the rural school had a pattern which most nearly fulfilled the goal of the workshop for growth in personal expression concerning both personal and professional activities. The characteristic pattern of the rural school teachers was contradictory to the pattern of "extreme personal reserve" exhibited by the group as a whole. "They (rural teachers) seemed to feel that they could open up and express themselves without being defensive of what they might say" (p. 99).

The investigators also made a surprising discovery which they did not anticipate at the beginning of their study. The two schools (city and rural) "which enrolled the greatest number of exceptional children were affected to a far greater extent by the workshop" than "the two schools . . . (suburban) and . . . (parochial), which had but a few exceptional children . . ." (1958, p. 74). It appeared to the directors of the workshop that, "Teachers engaged in daily contact with exceptional children were most receptive to the workshop program and responded

enthusiastically in the discussions" (p. 130). The authors (Haring et al., 1958, p. 132) interpret this finding as an implication of an immediate need on the part of teachers who are presently dealing with exceptional children in their daily teaching program. The fact that the investigators (p. 133) did not anticipate the possible effect of "function of the existing service load with exceptional children" upon "group differences in the modification of attitudes" was cited by them as a definite oversight in their experimental design. Another limitation pointed out by them is the finding that, ". . . increased knowledge per se" was not "a significant factor in effecting modifications of teachers' attitudes toward exceptional children" (p. 130). It is further pointed out that the "most effective results are seemingly obtained when programs designed for implementing attitude changes are presented in conjunction with actual experiences" (p. 132). Because of the findings described above, Haring et al. (1958) recommend further research to determine the relationship between the changes that occur in teacher attitudes and their "having actual experiences with exceptional children" (p. 134). The concept that a workshop experience such as the one described by Haring et al. (1958) is more effective with teachers who are teaching exceptional children than with teachers who have few opportunities for actual experiences with exceptional children reflects of John Dewey pragmatism. The present investigator is also

reminded of the Sartain theory which expounds on the philosophy that learning is a changed behavior due to experience. The difference in behavior between the teachers who engaged in daily contact with exceptional children and those who had few opportunities for actual experiences with exceptional children is explained by Haring et al. (1958) as follows:

The teachers not engaged in daily contact with exceptional children seemed less receptive to a program of this nature, became defensive and resorted to thinly veiled hostility or evasive intellectualization. A possible explanation for this reaction may lie in the fact that they failed to recognize a need for an experience of this nature, responded to the ideas of the group on a purely intellectual level without the support of past experience and association with this group of children, and were threatened or made anxious by the implied process of integration which seemed far less workable in abstraction for them than others had found it to be in actual practice (p. 130).

Haring et al. (1958) support the above concept with an analogy pertaining to the integration of Negroes. It appears to them that "a similar mechanism" is involved in connection with "a rejected and feared minority group." And in either case, "the absence of specific experiences . . . causes diffuse anxiety" (p. 131).

Recent Trends in Attitudes Toward the Educational Placement of Exceptional Children

The trend in modern education to provide for individual differences is exemplified by an increasing amount of interest among administrators and by the persistent efforts of special educators to place exceptional children

insofar as possible in the regular classroom (Dunn, 1963, p. 42). In many instances the vast expansion of special education programs is a result of an increased acceptance of children who deviate from the normal intellectually, emotionally and/or physically (Conner, 1961). It is generally known that parent pressure groups have backed legislation which has secured assistance for the development of more special education programs. As a result many problems have arisen concerning the identification and educational placement of exceptional children.

In an attempt to provide some guide lines for future research in special education the Los Angeles school district assisted by the United States Office of Education conducted a study in 1960, "for the purpose of acquiring data regarding: (a) definition, (b) function, and (c) organization and administration of special education programs" (Hodgson, 1964, p. 196). The questionnaire study defined three basic sources from which data was drawn. They were: (a) Special Education Specialists, (b) State Departments of Education, and (c) Professors of School Administration. The specialists were directors or coordinators and staff members who were known to give full-time to the field of special education. It was assumed that the State Department respondents "would reflect state recommendations and consequently, to a degree, possible trends." The professors of school administration were

chosen to serve as generalists as opposed to specialist respondents. The groups were obtained from various parts of the United States. Among the respondents the percentage of usable questionnaires received were 82 percent from State Departments; 69 percent from Special educators and 50 percent from Professors of School Administration (Generalists).

The findings contained in the Hodgson (1964) questionnaire study were inspected for the presence of relevant data concerning the attitudes of experts, state departments of education and generalists toward the educational placement of exceptional children.

In an attempt to define the scope of special education, Hodgson (1964) asked the respondent to indicate approval or rejection of a list of areas of exceptionality as a responsibility of special education. The respondents indicated that special education should include the following categories: (a) gifted, (b) mentally retarded, (c) mentally deficient, (d) emotionally and/or socially disturbed, (e) blind, (f) partially seeing, (g) cerebral palsied, (h) orthopedic, (i) chronic medical problems, (j) hospital teaching, (k) home teaching, (l) deaf, (m) hard of hearing, (n) speech reading, and (o) speech correction. The questionnaire respondents indicated that remedial reading, remedial art, foreign adjustment classes and corrective physical education should not be included

as functions of special education. All of the areas defined as special education were recommended for inclusion in a public school department of special education with the exception of the gifted and mentally deficient. Agreement was not found among the respondents regarding the responsibility of the school district for the education of preschool deaf, blind, or cerebral palsied pupils (Hodgson, 1964, 30 5, p. 198).

Although most educators are aware of the trend toward the goal which advocates placement of exceptional children in regular classrooms whenever possible, the words "whenever possible," according to Hodgson (1964) give rise to two points of view which contribute to the "philosophical goal of rehabilitation and habilitation as follows":

Two diametrically opposing viewpoints may be observed. One viewpoint indicates that a considerable number of youngsters within a given category of special education may never be emotionally and socially integrated with success within a regular classroom situation. In addition, doubt is also manifested regarding the meeting of specialized educational needs in an integrated classroom situation.

The opposite viewpoint tends to emphasize the need to accept the handicapped and give them an opportunity to learn to adjust to a normal classroom environment. This goal may demand that placement within a normal environment is the major means of developing social and emotional adjustment. In the sense of emphasis, one school of thought tends to stress the provision of specific educational and physical services; the other school of thought tends to emphasize social and emotional adjustment to a normal environment (p. 198).

In an attempt to determine the best means for the education of the various areas of exceptionality, Hodgson (1964) described five pupil organizational plans: the segregated plan, partial segregation, the cooperative plan, the resource room, and the itinerant teacher. Although he recognized the fact that more than one plan of organization might be necessary for a special education category Hodgson (1964) requested respondents to recommend one or more of the following types of organizational plan for each category of special education:

Segregated Plan. Special classes or school not on the same site as regular school.

Partial Segregation. Section of regular school reserved for special education classes, or special education school on the same site as regular school. No plan to specifically integrate children with regular classroom activities. Partial integration recognized by attendance at school assemblies, events, lunch room, etc., where feasible.

Cooperative Plan. Special education class or classes in which pupil may spend some portion of the day in the regular classroom.

Resource Room. Pupil registered in regular classroom, does all his work with the regular group, and only goes to the resource room and the special education teacher for materials and special training.

Itinerant Teacher. Pupil registered in regular classroom, does all his work with the regular classroom teacher, and received periodic specialized training, help, and materials from a traveling special education teacher.

The fact that, "the degree of segregation or integration of handicapped children is implemented in the form

of pupil organization" (Hodgson, 1964) was of special interest to the present study.

Although the Hodgson (1964) questionnaire study included the secondary schools as well as the elementary schools, the present investigation was concerned only with the pupil organizational plans in elementary schools which were given the highest frequency by the respondents in the state departments of education, specialists and professors of school administration. The recommendations for educational placement (of eight of the accepted classifications) made by the respondents in the state departments, special education departments, and departments of school administration gave highest frequencies to the following organizational plans in elementary school:

Classifi- cations	State Departments	Specialists	Generalists
Deaf	Partial Seg.	Partial Seg.	Partial Seg.
Men. Ret.	Partial Seg.	Partial Seg.	Partial Seg.
Men. Def.	Seg. Plan	Seg. Plan	Seg. Plan
Crippled	Coop. Plan	Partial Seg.	Coop. Plan
Hard of Hr.	Coop. Plan	Resource Room	Coop. Plan
Blind	Coop. Plan	Partial Seg.	Seg. Plan
Partially Seeing	Coop. Plan	Resource Room	Coop. Plan
Emotion. and/or Soc. Dis.	Partial Seg.	Partial Seg.	Coop. Plan

The resource plan of organization, which in this study represents the maximum amount of classroom integration, was recommended by the specialists as the best

plan for the hard of hearing and the partially seeing pupil. State department, special education department and department of school administration respondents were found to be in complete agreement relative to giving highest frequency to the segregated plan for the mentally deficient pupil. They were also in complete agreement relative to giving the highest frequency to the partial segregation organization plan for the deaf and the mentally retarded. The state department and specialist respondents gave the highest frequency to partial segregation plan for the emotionally and/or socially disturbed whereas the generalists recommended the cooperative organizational plan for this group. Partial segregation was the organizational plan which was given highest frequency by the specialists for the crippled group whereas the state department and generalist respondents gave the highest frequency to the cooperative plan for the crippled category. Although the organizational plan recommended most frequently by respondents in the state departments and departments of school administration was the cooperative plan, this organizational plan was not given a high frequency by the specialists.

The findings from the Hodgson (1964) questionnaire study discussed above appear to indicate a serious need for communication and coordination of special education placement policies among professional educators. The

diversity of organizational plans among the three sources of data groups also pointed up a need for more research pertaining to the attitudes of educators toward the educational placement of exceptional children.

Summary

The studies reviewed in this section, particularly those by Dickstein and Dripps (1958), Haring et al. (1958) and Hodgson (1964), dealt with respondents who were considering the acceptability of children for placement in regular classroom programs. The present investigator assumes that the same basic variables are operating in respect to exceptional children. Knowledge of exceptional children and teaching experience with them as well as personal reactions to their disabilities are undoubtedly influential factors when educators are considering the eligibility of exceptional children for placement in either part- or full-time regular class programs.

The Measurement of Attitudes

Measurement, according to Van Dalen (1962, p. 7) is "the cornerstone of the research movement." Since attitude research involves "subtle and difficult to measure factors," studies in this area need to have qualitative depth to compensate for the lack of quantitative precision (Hatch and Stefflre, 1958, p. 255). The review of literature indicates a strong attempt among social psychologists

to improve methodology and techniques for the measurement of attitudes. In consequence, there is now "a great mass of literature . . . dealing with methodology, as well as with the content of attitudes themselves" (Vincke, 1952, p. 322). The objective analysis of intergroup relationships is dependent upon the development of "standardized methods of measuring opinions and attitudes . . ." (p. 322). Measurement entails certain basic problems.

Problems of Attitude Measurement

The three major problems in measuring attitudes, as viewed by Vinacke (1952) are as follows: (a) attitudes are inferred; they can never be observed directly, (b) attitudes are not composed of definite units and if they were the equality of the units would be questionable, (c) attitude tests are extremely difficult to make valid and reliable (pp. 323-325). According to Vinacke (p. 323) Thurston devised a way to cope with the first problem:

Let us use opinions (the response) as an index and for whatever it is worth. Assume that measurements are obtained only in situations where there is a reasonable expectation that subjects will tell the truth and hence provide a dependable basis for our inference (Thurston, 1928).

Because the units of an attitude have not been definitely determined either in quality or quantity, "measurement (of attitude) is usually based upon the comparison of one person with another" (Vinacke, 1952, p. 323). Vinacke (p. 324) at this point quotes directly from McNemar:

If A scores 4, B--6 and C--8, you can't say that C possesses twice as much of the attitude as A. You can say that B's value differs from that of C in that same direction that A's value differs from B's (McNemar, 1946).

"In this way, individuals can be ranked in terms of their responses, thus providing a basis for some kind of quantitative treatment" (Vinacke, 1952, pp. 323-324). Vinacke describes several scaling techniques which have been developed (p. 324). One of the techniques, originated by Thurston (1925), provided a more systematic method for scaling attitude responses than existed in the early "survey" type of attitude questionnaire. Judges "sort possible items into piles corresponding to an 11-point scale, and each item is assigned a median value." The degree to which judges agree on the scale value of the various items provides criteria for item analyses. Items which survive the tests are selected for the questionnaire (Vinacke, 1952, p. 324).

A second scaling technique described by Vinacke is one developed by Likert (1932). It is based upon five degrees of agreement with a series of relevant propositions concerning the attitude(s) in question. It was found that the simple scoring of 1 to 5 was in accord with weightings in terms of standard-deviation scores. "Likert's system is easy to use and reliable" (Vinacke, 1952, p. 324). Vinacke refers to McNemar for a final evaluation of the Thurston and Likert scales. McNemar (1946) says that these two scales could "usefully be combined. . . . Thus the

Thurston method appears to be superior in the process of selecting and evaluating items, whereas the Likert scoring system is clearly simpler and probably just as good" (Vinacke, 1952, p. 324).

Vinacke reports on a third method of "scale analysis," as proposed by Guttman (1944). In the Guttman method of scoring units "are worked out by defining the relation between answers to a series of questions" as follows:

The order in which individuals fall in answering the questions is converted into a quantitative score. Thus a general attitude is broken down into degrees; i.e., the individual who falls at one end of the scale is characterized by more knowledge of something, more interest in something, more acceptance of something . . . than the individual who falls at the other end (Guttman, 1944, pp. 139-150).

Guttman (1950) defines "two of the most important problems of all measurement concern": (a) the limitation of the measurement to one dimension at a time and (b) the determination of some fixed point to which measures along this single continuum can be anchored (p. 46). The social sciences "have proposed various techniques for determination of unidimensionality and fixed point of reference" (p. 46). Guttman (1950) proposed "scalogram analysis" as a simple technique for "testing a series of qualitative items for unidimensionality, while the technique of intensity function provides a simple method for finding a meaningful, objective cutting point along a single continuum" (p. 46). He also stipulates that any definition of attitude "intended to promote research" should "be defined

in terms of a delimited totality of behavior." His basic premises are: "(a) A scientific concept must be defined in terms of observations; . . . or by operations on the observations, (b) A definition is scientifically useful only in so far as it leads to objective research." He holds that any sociological concept "needs to be based on observations of human behavior and will be useful only to the extent that the requisite observations can be made and analyzed rigorously" (p. 49). If such conditions as those stipulated here are incorporated into the research, Guttman maintains that a complete definition for attitude is unimportant. He does, however, suggest the use of classifications and subclassifications for an operational definition.

Classifications and Sub-Classifications

A subarea of behavior is said to be "of interest" if the universe of behavior, of which it is a part, is "of interest" (Guttman, 1950, p. 52). He further maintains that:

. . . the relationship of subarea to outside variables can be studied and be useful regardless of the role of the subarea in the total area. In an external prediction problem, if an adequate prediction can be made from only a subarea of an attitude, then that may be all that is needed for practical purposes; it need not be necessary to study the entire area" (p. 53).

This investigator theorizes that, "By recognizing the different subuniverses that can be in an attitude, one

can avoid the temptation of saying that a particular sub-universe is 'really' the attitude." For example, some Negro soldiers were found to respond differently to "questions put by Negro interviewers" than they did to "the same questions put by white interviewers." Rather than try to determine "the 'real' attitude of the respondents" the investigator should recognize "two distinct, though related, subuniverses" (p. 53). Guttman emphasizes the importance of identifying "the acts that are to be considered intrinsic to the attitude, when the investigator takes the viewpoint of attitude-as-behavior" (p. 55). "Questionnaire responses"¹ at present are by far the most manageable kind of subuniverse of attitudinal behavior" (p. 53).

Many items can be included in a questionnaire and responded to in a very short period of time, whereas other kinds of subuniverses of behavior may take place over long periods of time and be difficult to observe systematically for a satisfactorily large group of people (p. 54).

It has been found that if a universe is scalable for an entire population, it follows that it will also be scalable for its major subpopulations. Degrees of comparison can be made only if "the same scaling obtains in both cases being compared" (pp. 89-90).

¹Questionnaire responses were used extensively by A. S. Barr, R. A. Davis, and P. O. Johnson, (1953).

Scale Analysis

As was indicated previously, questionnaire responses which yield qualitative data may be studied by scale analysis. Scale analysis can be applied equally well to the study of attitudes as to the study of opinions. It provides a technique for determining whether a set of items can be ordered along a single dimension. If a particular attitude universe is really one-dimensional, any sampling of items from it should also be one-dimensional, and should provide an ordering of respondents essentially the same as that provided by any other sampling of items from the universe. If the predicted ordering does not occur, the universe is judged to be multi-dimensional and consequently not scalable (Green, 1954, p. 357). If items suggest an underlying single dimension, it is meaningful to describe a respondent with a higher total score as possessing more of the characteristic being measured than someone with a lower total score. If scale properties are obtained, evidence is provided for the existence of a defined position (attitude) in the particular respondent group in respect to the isolated area of measurement involved.

Although unitary scales can be developed by the Guttman scaling technique, McNemar (1946, p. 367) has suggested that, "Because of its many grave difficulties . . . the single question technique should be replaced by attitude scales." Three basic requirements for attitude

scales are reliability, validity, and unidimensionality. McNemar (p. 294) suggested that attitude testers use the term, "reliability" in its restricted meaning, i.e., "the accuracy with which an individual's attitude is measured, or the degree of error involved in assigning an individual to a class or in establishing his rank-order position." McNemar (p. 294) also suggests that the term validity be used in a restricted sense: "Does the test, scale or question tap the variable it is supposed to measure"? As viewed by McNemar (p. 296), "The problem is essentially that of supplying evidence that the device used measures or classifies the attitude or opinion it was designed to measure." A generally accepted method of test validity is "correlation with some outside criterion which has proved to be satisfactory as a measuring instrument or as a basis for discrimination" (Kerlinger, 1956, p. 289).

Likert Scoring Weights.--"Scores by this simpler method yielded correlations which scored by sigma scoring were in excess of .99 and, as one would anticipate from this fact, there were no noticeable differences in reliabilities" (Kerlinger, 1956, p. 306).

Synthetic Method

Stern et al. (1956) demonstrated that a synthetic model can be used effectively for prediction and described it as follows:

(It) is susceptible to quantitative and objective measurement, and constitutes an economical alternative to the assessment methodologies. . . . Its effectiveness depends, however, upon the degree to which the synthetic model can be specifically related to the performance situation, as well as upon the actual presence of persons among those being screened who can be typified in terms of the synthetic model. This latter qualification constitutes its major limitation. Since it involves an abstract model with consequences for performances arrived at deductively, only the actual testing itself will reveal whether persons corresponding to the model are actually to be found in the situation.

According to Sterm (p. 248) the synthetic approach is the least costly in terms of time and money when considering the time expended on developing the questionnaire and the cost of reproducing, administering and scoring it and analyzing the results. "The one problem with this approach is that there is no a priori certainty other than the confidence of the investigator that representatives of the personalities for whom the test has been constructed will be found among the candidates who are to be assessed" (p. 248).

A significant contribution to the field of attitude measurement is the Kerlinger (1956) Q. Study of the Educational Attitudes of Professors and Laymen. Its methodology is based on Stephenson (1953) Q technique combined with an effort to adapt some statistical concepts, the main one being Fisher's ideas of variance. This study tested a theory of educational values and attitudes based on the following hypotheses:

1. Individuals having the same or similar occupational or professional roles will hold similar attitudes toward a cognitive object which is significantly related to the job. If they have dissimilar roles they hold dissimilar attitudes.
2. There exists a basic dichotomy in educational values and attitudes of people, corresponding generally to "restrictive" and "permissive" or "traditional" and "progressive" modes of looking at education.
3. Individuals will differ in degree (or strength) of dichotomization, since this strength of dichotomization is a function of occupational role, extent of knowledge of cognitive object (education), the importance of the cognitive object to the subjects and their experience with it (Kerlinger, 1956, pp. 289-290).

This investigator claims the Q technique to be appropriate because it uses a large number of choices and "Attitudes, too, are 'choices,' 'already made' choices, in that they are sets of predispositions to certain kinds of behavior" (p. 289). The results seem to indicate that occupational roles and role expectations do exert a strong influence on attitudes and values. The basic idea of "occupational role as an independent variable influencing attitudes" was substantiated. The statistical concept combined with the Q-technique was a definite step forward in the measurement of attitudes. Previous to the above study attitude measurement was neglected, probably because there was no satisfactory technical method for testing the individual's attitude structure" (p. 289).

Direct vs. Indirect Methods

Every investigator in the social sciences needs to be aware of his "responsibilities to colleagues who may have to 'pay' later for the investigators laxity . . .," as well as to the significant others involved in the research (Festinger, 1953, p. 3). Festinger (1953) maintains that "most subjects" do not resent being "duped" if they understand why it is necessary. "The investigator who uses methods of 'temporary duping' of laboratory subjects does not necessarily violate this concept of honesty, whereas sheer thoughtlessness on the part of an investigator who would never think of lying to a client may violate it fundamentally" (p. 4).

Some investigators (Haring et al., 1958, p. 27; Sherif and Hovland, 1961, p. 126 and Wandt, 1952, p. 120) stress the importance of using an indirect method of measuring attitudes in situations where the respondents may have "incentive to conceal the true attitude" (Wandt, 1952, p. 120). One approach to this problem is through the use of the disguised-structured items (Haring et al., 1958, p. 27; Wandt, 1952, p. 120). The term "disguise" refers to "the degree to which the real purpose of the attitude measure is concealed from the respondent" (Haring et al., p. 27). The term "structured" is defined as follows:

A second aspect of the treatment of content in attitude tests is based upon the extent to which the task or response has been structured. A highly structured test is one in which the response

alternatives are exhaustively specified and readily scorable, in contrast with the ambiguity of the task and the spontaneity of response characteristic of nonstructured instruments (Haring et al., 1952, p. 27).

After extensive study of the placement of items on controversial social issues Sherif and Hovland (1961, p. 126) conclude: "The investigation of attitudes will proceed more rapidly and profitably when a behavioral index of the individual's attitude, based on performance in a task apparently unrelated to his attitudes, can be utilized in research practice." These investigators (1961, Ch. 5) present a detailed analysis of results which show that "the distribution of scale values, as well as the choice of an appropriate number of categories for placement (the individual's "own" categories), are closely related to the individual's stand on an issue. A powerful 'indirect' assessment method may thus be provided for attitude measurement. Further definitive research on this problem is needed" (p. 204).

Thus, from the findings discussed above, it seems apparent that indirect attitude tests lie closer than direct ones to contemporary attitude theory.

Summary of Selected Techniques

It is evident that scaling procedures for measuring attitudes are providing more refined techniques for accurate, quantitative measurement. Probably the best known are the Thurston, Likert, and Guttman procedures.

In the Wandt study (1952, p. 122) it was found that ". . . verbalized attitudes may be measured indirectly by means of disguised items." This study was considered relevant from the standpoint of its aim to understand teachers' attitudes toward certain groups contacted in the schools. It was particularly concerned with "the relationships between teachers' attitudes and: (a) grade level taught, and (b) years of teaching experience" (p. 117). A comparison of the mean attitudes of teacher groups classified by grade level taught indicated that elementary teachers had more favorable attitudes than secondary teachers. It was also found that teachers with more experience tended to be more homogeneous in their attitudes than the less experienced teachers (p. 117). The test used was the Inventory of Teacher Opinion and to get at the inter-relationships factorial analyses were conducted. The three factorial analyses were: "(a) analyses of the eight positively stated scales; (b) analyses of the eight negatively stated scales; (c) analyses of all sixteen scales (including a second-order analysis), Thurston's centroid method was used in all of the analyses with rotation to oblique simple structure" (Wandt, 1952, p. 117). It is of particular interest to this research to note that "teacher attitudes toward pupils" was one of the most significant differences found between elementary teachers and secondary teachers. The elementary teachers, in general, showed more favorable attitudes than secondary

teachers (p. 117). Wandt gave one statement from each of his eight scales to illustrate content. Those dealing with scales measuring attitude toward pupils were:

(positive)-Most pupils take their responsibility seriously.

(negative)-Pupils naturally "have it in" for their teachers.

Non-voluntary indirect attitude tests assess "bias" or a kind of involuntary "interference with tasks of learning, perceiving, remembering and evaluating" (Campbell, 1950, p. 33). Both in attitude testing and personality study, "distortions of performance in dealing with the environment provide objective evidence of an individual's unique picture of his world . . . the development of structured indirect attitude tests is thought to be a step in this direction" (p. 34).

If the term, "environment" is limited to the items on an attitude towards and knowledge concerning a cognitive object in education (viz. educational placement of exceptional children) then the hypotheses tested would concern the relationship between the respondent's position and that advocated by expert judges on the educational issue under consideration.

CHAPTER III

EXPERIMENTAL DESIGN AND PROCEDURES

The review of research on the attitudes of professionals and non-professionals toward the education and integration of exceptional children revealed that the major portion of the research deals with attitudes toward personal characteristics of certain exceptionality categories rather than toward the educational placement of such children. The present investigator wishes to put emphasis on the fact that exceptional children, like normal children, are all different from each other; with both groups needing appropriate classroom placement. This then is the rationale, for limiting this study to an investigation of the attitudes of teachers towards the "educational placement" of exceptional children.

This chapter, then, gives a brief summary of both the general and specific purposes of the present research study followed by a detailed description of the experimental design and procedures employed in the study.

The rationale for the selection of the measuring instruments with which to ascertain amount of knowledge

and understanding pertaining to exceptional children will include a description of the scoring procedures. An attempt will be made to evaluate the degree to which the validity and reliability of the data gathering instruments, including the questionnaire, have been established.

The nature of the sample chosen for the present study is discussed, with special attention to opportunity for teacher contact with those in special education programs. The size of the sample, its representative characteristics of the total teaching staff of an urban school system is also taken into consideration.

One of the principle objects of this chapter is to identify the variables chosen as potential determinants of the attitudes being investigated. Research procedures to control the independent variables is explained in detail.

An attempt is made to describe the method of collecting data clearly enough to be replicated. The time, place, duration, and forms for collecting the data is reported in addition to concise descriptions of the administration procedures.

The statistical procedures for the analysis of the data is given in detail, together with an attempt to justify the choices of the specific statistical procedures. The plan used for the analysis of the two measuring scales is described and the relationship between the two dependent

variables is discussed. The mean difference analyses is presented, followed by a test procedure designed to discover whether or not any differences found in the analyses were significant differences.

The major research hypotheses is organized under five headings, namely; hypotheses related to: (a) type of teaching contacts, (b) amount of teaching experience, (c) amount of academic credit, (d) type of consultation experience, and (e) correlation of attitude and knowledge.

Although the planning, collecting, processing and organizing of data presented the major task involved in the present research study, the task loomed to a threatening proportion when the investigator was confronted with the fact that the original scoring keys were unobtainable. This situation is discussed more fully under "limitation of the study."

Experimental Design and Procedures

The purpose of this study was to investigate teacher attitudes toward the classroom integration of exceptional children in relation to experience with, degree of knowledge of, and understanding that teachers have about exceptional children.

The acquisition of normative data about attitudes of various interest groups toward special education and rehabilitation is needed in the United States to understand the attitudes of sub-cultural groups (Friesen, 1966, p. 6).

It is one of the main assumptions of the present study that exceptional children constitute a sub-cultural group and are less accepted than their normal peer groups.

Purpose of the Study

A review of the literature revealed that increased knowledge and familiarity with an attitude stimulus does tend to modify attitude (Roehrer, 1961, p. 70). Findings such as the above support the assumption that attitudes toward exceptional children are modified by the amount of knowledge gained through consultations and academic course work pertaining to exceptional children and the amount and the type of teaching experience with them. Hence a comparison of teacher attitudes toward classroom integration of exceptional children in relation to the amount of accurate information pertaining to their respective exceptionalities and the amount and type of teaching contact with them should yield some specific information for the resolution of the following research¹ questions:

- 1-a. Do teachers who have had full-time teaching contact with exceptional children have a more realistic acceptance of them than teachers who have had part-time teaching contacts or no teaching experience with exceptional children?

¹It is to be understood that the statistical procedure actually tests the null hypothesis, not the research question.

- 1-b. Do teachers who have had full-time teaching contacts with exceptional children have a significantly greater amount of accurate information concerning them than teachers who have had part-time or no teaching contacts with them?
- 2-a. Do teachers who have had an extensive full-time teaching contact with exceptional children have a significantly greater amount of realistic acceptance for them than teachers who have had an extensive part-time contact or no teaching experience with exceptional children?
- 2-b. Do teachers who have had extensive full-time teaching contacts with exceptional children have a significantly greater amount of accurate information concerning them than teachers who have had extensive part-time teaching contacts or no teaching experience with exceptional children?
- 3-a. Do teachers who have had an extensive part-time teaching contact with exceptional children have a significantly greater amount of realistic acceptance for them than teachers who have had no teaching experience with them?
- 3-b. Do teachers who have had extensive part-time teaching contacts with exceptional children have a significantly greater amount of accurate

information concerning them than teachers who have had no teaching contacts with them?

- 4-a. Do teachers who have earned extensive course credit pertaining to exceptional children have a significantly greater amount of realistic acceptance for them than teachers who have had some or no course credit work pertaining to exceptional children?
- 4-b. Do teachers who have earned extensive course credit pertaining to exceptional children have a significantly greater amount of accurate information about them than teachers who have earned some or no academic credit pertaining to exceptional children?
- 5-a. Do teachers who have given consultations pertaining to exceptional children have a significantly greater amount of realistic acceptance for them than teachers who have received periodic consultations with a specialist or teachers who have had no opportunity to consult with a specialist in his chosen field?
- 5-b. Do teachers who have given consultations pertaining to exceptional children have a significantly greater amount of accurate information pertaining to exceptional children than teachers who have received periodic consultations with a

specialist in the area of the exceptionality or teachers who have had no opportunity for such consultations?

6. Do teachers who express a significantly greater amount of realistic acceptance for exceptional children also express a significantly greater amount of accurate information pertaining to exceptional children?

Rationale for Selection of Measuring Instruments

The previous research questions served as guidelines for the construction and selection of instruments which would measure the designated variables. Two dependent or criterion variables which required an appropriate procedure for measurement were: attitudes of teachers towards the children described in the CII (cognitive objects in education) and amount of accurate information concerning the cognitive objects chosen as the attitude stimulus. Four independent variables were measured through direct questions in a questionnaire: type of experience, amount of experience, amount of course work background, and type of consultation experience. The Personal Data Questionnaire (Appendix C) is described in detail (p. 235).

The Classroom Integration
Inventory (CII)

The Classroom Integration Inventory, developed by Haring (1958, pp. 143-146) is described in detail in Chapter II. The CII was adopted for the present study as the most appropriate available device with which to measure the amount of realistic acceptance of teachers toward classroom integration of exceptional children. The CII in the present study covers ten areas of exceptionality with six items (except in the area of emotional disturbance, which has five items), in each area representing two slight, two moderate and two severe examples of impairment. The area of intelligence was subdivided into mentally handicapped and superior intelligence to facilitate the subscoreing process. This is discussed under the section on Scoring of the CII Test. The ten areas of exceptionality described by Haring et al. (1958, p. 39) were coded for the computer (see Appendix E) in eleven categories. They are: (a) Behavior Disorders, (b) Emotional Disturbances, (c) Impaired Hearing, (d) Impaired Speech, (e) Impaired Vision, (f) Orthopedic and Cardiac Disorders, (g) Physical Attractiveness, (h) Seizures, (i) Retarded, (j) Superior Intellectual Ability, and (k) Bowel and Bladder Incontinence.

Examples of items in the area of behavior disorders would be:

1. Alfred is defiant and stubborn, likely to argue with the teacher, be willfully disobedient,

and otherwise interfere with normal classroom discipline.

- 33. Chester is deceitful, tells lies, and cheats in school and at play; he has been involved in several thefts, and is a persistent truant.
- 41. Carla is a persistent talker, whisperer and notepasser.

The teachers' reactions to the items in the CII test were obtained in accordance with the following alternatives:

- 1. If you feel you could handle such a student in your regular classroom without any fundamental change in your present procedures.
- 2. If you feel you could handle such a student in your regular classroom provided that advice from a specialist or consultant were occasionally made available to you whenever you felt a need for such aid in dealing with some particular problem.
- 3. If you feel you could handle such a student in your regular classroom provided that a full-time specialist were available at your school who could provide supplementary training for the student and frequent consultations with you.

4. If you feel that such a student would benefit most by being assigned to a special class or school.
5. If you feel that such a child cannot be handled profitably within the context of regular or special public school education (Haring, 1958, p. 33).

Scoring of the CII Test: Basis
for Determining the Realism
Score

By assigning numerical weights to each alternative, varying from 5 for the most desirable placement to 1 for the most undesirable placement; a realism score could be computed for the sixty items with a score range from 60 to 300. The highest scoring respondents were those whose responses on the items corresponded most closely with the "most desirable placement" established by five specialists in special education. The lowest scoring respondents were those whose responses on the items corresponded most closely with the "least desirable placement" (the judge's fifth choice) as judged by the five specialists. Since the original scoring key for the CII test was not available it was necessary to re-establish the "correct" realism score for each item.

The scoring key for the realism scores was re-established by five specialists in the area of exceptional children who judged each item with reference to the most

realistic placement of the case described in the item. The judges, working independently, rated each item on "most desirable placement." Among the judges' choices for placement, 65 percent agreement was found on the 20 severe items, 59 percent agreement on the 20 moderately severe items, and 65 percent agreement on the 20 slightly severe items. A committee met together and reached a common agreement on all but one of the 60 items. Item 17, in the area of emotional disturbances, was omitted from the final form of the CII test because it lacked inter-judge reliability. The realism scores of the teachers were found on the remaining 59 items by assigning a value of 5 if the teachers' choice of placement on the item was the same as the judges' first choice, a value of 4, if the teachers' choice was the same as the judges' second choice, a value of 3, if their choice was the same as the judges' third choice, a value of 2, if their choice was the same as the judges' fourth choice, and a value of 1, if the teachers' choice was the same as the judges' fifth choice. By assigning these numerical weights to each of the five choices, varying from 5 points for a judge's first-choice response to 1 point for the judges' fifth-choice response, the score ranged from 59 to 295.

This method of computing the realism scores has been designed to reveal the degree of realistic acceptance characterizing the teachers' relationship to exceptional children. This 295 point scale--based on the teacher's

selection of an educational placement for severe, moderately severe and slightly severe exceptionalities--ranges from regular classroom assignment without special assistance to complete exclusion from school. The most appropriate educational placement for an exceptional child depends on the severity of the handicap as well as on the kind of exceptionality. The CII test permits the respondent to differentiate between the varying degrees of exceptionalities while taking a position on program intensity. The social-distance concept of the CII scale is straight forward and should still apply to the sample in the present study.

Reliability of the Re-established Realism Scores

The judges' choices for placement among the three levels of severity ranged from 53 percent inter-judge agreement in the behavior category to 73 percent agreement among the judges' choices for educational placement for exceptional children in the impaired speech category. The physical attractiveness category came next with an inter-judge agreement of 70 percent. Although it would be of interest to compare the amount of inter-teacher agreement among the ten areas of exceptionalities with the amount of inter-judge agreement expressed by their respective realism scores within each of the following ten categories: (a) Behavior, (b) Emotional Disturbances, (c) Impaired Hearing, (d) Impaired Speech, (e) Impaired Vision, (f) Orthopedic and Cardiac Disorders, (g) Physical Attractiveness, (h)

Seizures, (i,j) Retarded and Superior Intellectual Ability, and (k) Bowel and Bladder Incontinence, the present study is limited to testing relationships between amount of knowledge, amount of acceptance, amount and kind of experience with exceptional children, and attitudes toward classroom integration. Much information has been gathered by specialists within these various areas of exceptionality but there appears to be no studies which have attempted to get a comparative view of specialist versus teacher attitudes towards these various areas of exceptionality.

Validity of the Re-established Realism Scores

It seems reasonable to assume that the full-time special class teachers' realism scores would show a higher percentage of homogeneity within these ten areas than the full-time Regular Class teacher who has taught children with exceptionalities. It also seems probable to anticipate that the attitude realism scores of Special Class teachers would be more similar to those of the judges' choices of placement than the attitude realism scores of Regular Class teachers who are classified within the same amount of experience level. The realism scores of the Regular Class teachers may reveal certain patterns of acceptance depending upon their amount of knowledge and experience background. One might anticipate that

the teachers in schools with Special Classrooms would rate much closer to those of the experts than would teachers in schools without Special Education Classrooms.

The General Information Inventory
(GII)

The General Information Inventory developed by Haring (1958, p. 56) to test for knowledge of exceptional children originally contained 100 items covering: (a) Behavior Disorders, (b) Emotional Disturbances, (c) Impaired Hearing, (d) Impaired Speech, (e) Impaired Vision, (f) Orthopedic Disorders, (g) Miscellaneous (medical, attitude and responsibility), (h) Seizures, (i) Retarded, (j) Superior Intelligence. "There was no systematic attempt (on the part of Haring et al.¹) to make sure that there was an item in each degree of severity of handicap as in the case of the classroom integration inventory." The General Information Inventory, however, does include items about children who are severely handicapped as well as those who are mildly handicapped. The areas of exceptionality covered by the two inventories are the same excepting for the items coded for the computer in the present study under code number 7. In the CII the six items in area number 7 deal with handicaps to physical attractiveness whereas this problem was not touched upon

¹Statement taken from March 29, 1966 personal communication from Norris Haring.

in the GII. In the GII the ten items coded under code number 7 deal with medical aspects of exceptionality, attitudes toward, and responsibility for, exceptional children. The items in the latter three groupings were lumped together under GII subscore number 7 and labeled "miscellaneous." The miscellaneous items in the GII were not dealt with in the Classroom Integration Inventory. Another dissimilarity between these two inventories was noted in the six items listed for the CII subscore number 11. These items which dealt with three levels of bowel and bladder disorder were not treated in the General Information Inventory.

Scoring of the GII Test: Basis
for Determining the Knowledge
Score

The original General Information Inventory as used by Haring (1958, p. 56) contained 97 multiple choices with three additional essay type questions. It was decided to omit the final three essay questions (items 98-100) from the scale used for the present research because their subjectivity would present a scoring problem. The remaining 97 multiple choice questions were subjected to an item analysis which resulted in the omission of six more items, two items from the speech area, two items from the area of mental retardation, one item from the miscellaneous group and one item from the seizures group. These six items were omitted because they were judged by specialists

in the particular area of exceptionality to be outdated or non-valid questions. Thus 91 items were selected as appropriate questions with which to measure factual information about exceptional children in the present study. The questions contain certain popular misconceptions of the physical, intellectual, social, and emotional nature of exceptional children. For example: 79. The blind (a) have superior sensory acuity, (b) pay attention to auditory cues more than do seeing people, (c) develop a sixth sense, (d) have markedly superior musical ability.

✓ One point was assigned to each correct response on these 91 multiple choice items, thus giving a range of possible scores from 0 to 91 on the modified General Information Inventory. The GII Knowledge scores of the teachers, especially in similar areas of exceptionalities covered by GII as well as the CII scales would enable an analysis to determine whether the amount of knowledge concerning exceptionalities affects the amount of realistic acceptance of such children.

In order to investigate the amount of relationship between similar areas of exceptionality on the GII and CII it was necessary to examine the commonalities of the content found in the respective subscore groups of the two inventories.

Subscore Content Comparison

Subscore Categories for CII	Subscore Categories for GII
1. Behavior Disorders	1. Behavior Disorders
2. Emotional Disturbances	2. Emotional Disturbances
3. Impaired Hearing	3. Impaired Hearing
4. Impaired Speech	4. Impaired Speech
5. Impaired Vision	5. Impaired Vision
6. Orthopedic and Cardiac Disorders	6. Orthopedic Disorders
7. Physical Attractiveness Handicap	7. Miscellaneous
8. Seizures	8. Seizures
9. Learning Handicap	9. Learning Handicap
10. Intellectual Exceptionality	10. Intellectual Exceptionality
11. Bowel and/or Bladder Disorders	

The above comparison of the areas of exceptionalities covered by the CII and GII show that areas 1, 2, 3, 4, 5, 8, 9 and 10 apparently cover similar content material. Areas number 6 in the two scales are similar in that the two scales deal with the orthopedic area but the GII scale does not deal with the cardiac disorder¹ as does the CII category 6. The dissimilarity of category number 7 on the CII and GII are readily seen since the CII subscore category

¹The one item dealing with cardiac was put into the "miscellaneous" (7).

contains six items on handicaps to physical attractiveness whereas the GII subscore category number 7 contains some miscellaneous items concerning medical aspects of exceptionalities, attitudes toward exceptional children, and responsibility for their education. The other outstanding difference in content covered in the CII and GII is found in Subscore Category 11, an exceptionality dealing with bowel and bladder incontinence which is not covered by the General Information Inventory. The CII and GII subscore groupings which deal with similar exceptionality content areas also do not have an equal number of items within their respective scales excepting for categories 2--on emotional disturbances which is represented by five items on each of the measuring instruments. GII category 8 on seizures contains only four items and represents the smallest subscore grouping on the GII. The learning handicap (area number 9) category covers 18 items, the largest subscore grouping on the GII scale. The subscore category 9 on the CII scale contains only 3 items on learning handicap which is one of the smallest groupings within the CII scale, the other one being intellectual exceptionality which also has only 3 items.

When correlating GII subscores with CII subscores the number of items which range from 4 items in the GII-8 seizures subscore group to 18 items in the GII-9--learning handicap subscore category--will require careful attention.

The number of items within the CII subscore categories range from 3 items in each of the learning categories to 6 items in each of the others excepting the emotional disturbances category which was decreased to only five items. Haring (1958, p. 81) believes that the three degrees of deviation, severe, moderate, and slight, were not enough to validate the change that "real differences were being covered by treating the three degrees of deviation together in each area." He found that "teachers did not increase any more in one degree of deviation than another with respect to realistic placement" (Haring, 1958, p. 81).

Validation of Instruments

Of more importance than the comparison of the results of the CII and GII tests with scores received by the same teacher groups on the Activities Index and Picture Judgment Test (Haring, 1958, p. 104) was the application of the Critical Incident Technique for the purpose of validating the GII and the CII (Haring, 1958, p. 112). The Critical Incident test was a straight forward technique which asked the subject to cite ways in which his teaching behavior had been changed by certain learning experiences (Haring, 1958, p. 57). The critical incidents reported by the teachers revealed development of attitudes of increased acceptance and understanding pertaining to exceptional children. This evidence suggested that the

gains measured by the Classroom Integration Inventory and the General Information Inventory were "an accurate reflection of attitude development among the teachers engendered by the workshop" (Haring, 1958, p. 112).

Although the validating critical incidents technique has some limitations the rationale for item selection was clearly stated and the CII and the GII represent an attempt on the part of the present investigator to fill a gap in a field of measurement which is in need of further study. The Classroom Integration Inventory and the General Information Inventory appear to be the best instruments now available for use in the present study.

The Research Population

The elementary schools of Jackson, Michigan had a total of 262 teachers on the combined staffs of their 20 schools graded from kindergarten through sixth grade in June, 1965. There were 7,489 children in these grades coming from homes which contributed around 15 percent of the 50,720 individuals who made up the total population of the city.¹

Only six of the 20 elementary schools had special education programs. One of these six schools was just getting its special education program re-established after having been several years without a program. This school

¹R. L. Polk and Company, Jackson City Directory, 1966.

also had the largest staff turn-over of any school in the district. For these reasons it was decided to exclude this school from the sample of schools chosen. The five schools with special education programs employed 84 teachers whereas the five schools from those which had no special education programs employed 63 teachers on their combined staffs. The last five schools were chosen at random from the schools which had not been providing special classrooms for exceptional children. The 147 teachers in the ten participating schools represented 56 percent of the total elementary school faculty. Since 9 out of the 147 teachers failed to respond there were 138 usable teacher responses in the final sample which represented 93.9 percent classroom teacher response which was judged as a very good return from the teacher group. Further, there was a 97.6 percent response from the staff which had the most opportunity for contact with special education programs and an 88.8 percent response from the schools which provided the least amount of opportunity for contact with those enrolled in special education classes.

The response of six student teachers practicing in the regular classrooms of the schools which provided special education programs were not anticipated but they were included in the sample as a "student teacher" group to avoid a possible bias in the data involving the experience variable.

The ancillary group which included six speech correctionists, an occupational therapist, a physical therapist, a school diagnostician, and the special education coordinator were kept separate from the teacher group to avoid a possible bias effect on the "type of teaching contact" variable. The six student teachers and ten ancillary respondents along with the 138 classroom teachers yielded a total sample of 154.

The geographical distribution of the participating schools by socioeconomic status appeared to be uniform and it was felt that the entire staff of the school district's elementary schools was satisfactorily represented.

Selection of Variables

Dependent Variables

A well conceived hypothesis and its deduced consequences require that variables employed in the research be precisely identified (VanDalen, 1962, p. 222). The rationale for the selection of the two dependent variables, amount of knowledge and amount of acceptance have already been carefully reviewed. It was these dependent variables which prompted the selection of the two measuring instruments (GII and CII) as they purported to measure these two areas.

The independent variables were chosen because of their suspected relationship to the dependent or criterion

variables. The major independent variables (antecedent conditions) which were suspected of acting upon the dependent variables (knowledge and acceptance) are described in the following section.

Descriptions of Independent Variables

The four variables selected for investigation as determinants of responses of teachers on the GII and CII tests are those of: (a) type of teaching contacts, (b) amount of teaching experience, (c) amount of academic credit, and (d) type of consultation experience.

As a means of determining the degree to which each independent variable was present among the respondents in the sample, it was necessary to define specific categories. They are defined as follows:

A. Type of Teaching Contacts

The type of teaching contacts experienced by the respondents was defined in the following terms:

- ✓ 1. Teacher who had no contact.
- ✓ 2. Teacher who shared the teaching program of an exceptional child.
- ✓ 3. Ancillary personnel who shared the program of an exceptional child.
4. Regular class teacher with full responsibility for the program of one or more exceptional children.

5. Special class teacher with full responsibility for educational programs of exceptional children.

B. Amount of Teaching Experience

The amount of teaching experience with exceptional children was defined as follows:

1. Teacher with no teaching experience with exceptional children.
2. Teacher with one or more years of teaching experience in a sharing program for one or more exceptional children.
3. Teacher with one or more years of full-time responsibility for the educational program of one or more exceptional children.

The chronological scope of the study was limited to teachers whose designated teaching experiences with exceptional children took place during all or a part of the five year period extending from September, 1960 to June, 1965. The teachers with no experience in teaching exceptional children and teachers with less than one year of teaching exceptional children were requested to indicate any teaching experiences with exceptional children prior to the specified time period.

C. Amount of Academic Credit

The amount of academic credit earned in courses pertaining to exceptional children was defined as follows:

1. No special education, education or psychology courses covering some or all of the areas of exceptionality listed in the study.
2. One term or less than one year of credit earned in education or psychology courses covering some or all of the areas of exceptionality listed in this study.
3. One year or more of academic credit earned in education or psychology courses covering some or all of the areas of exceptionalities listed in this study.

D. Type of Consultation Experience

The type of consultation experience pertaining to exceptional children was defined as follows:

1. Periodic consultations with a specialist in the area of one or more of the exceptionalities listed in this study.
2. No opportunity for consultations in the desired area or areas of one or more of the exceptionalities listed in this study.
3. Experienced in giving consultations pertaining to one or more of the areas of exceptionalities listed in this study.

Although the above four variables were of primary concern in the experiment, there was one more important variable which received consideration: i.e., future educational goals of the respondent.

Educational plans of the respondent for educational advancement might have introduced bias into the experiment. For instance, if a teacher with no experience in the teaching of exceptional children had plans for going into special education teaching, his responses could be considered to be biased. Because of an error in coding, six respondents with plans to be special education teachers were not eliminated. Some additional variables were included to provide information concerning the characteristics of the respondents in the study: (a) frequency of listed exceptionality areas in described experiences, (b) exceptionality area of greatest amount of contact, (c) area of exceptionality considered most desirable to teach, (d) area of exceptionality considered least desirable to teach.

Data for the variables described in this section were obtained through the use of a personal data questionnaire discussed in the following section.

The Personal Data Questionnaire

The purpose of the Personal Data Questionnaire was two-fold: (a) to collect specific data needed to test the hypotheses, and (b) to identify any characteristics among the respondents which were related to the variables.

The first and most important purpose in preparing the Personal Data Questionnaire was to design an instrument which would yield specific information on the variables under test in the hypotheses. The types and amount of

experience in teaching exceptional children had to be defined in sufficient detail to assist the teachers from confusing these two variables. The construction of the questionnaire was guided by the following specific purposes:

1. To collect data descriptive of five types of teaching experience with exceptional children.
2. To collect data descriptive of three levels of amount of teaching experience with exceptional children.
3. To collect data for three levels of amount of academic credit in courses pertaining to exceptional children.
4. To collect data descriptive of three types of consultation experience pertaining to exceptional children.

The check list form was used for organizing the characteristic descriptions of each variable. Data concerning the additional variables were collected via the same Personal Data Questionnaire in a similar check-list form. The purpose of the other variables was to identify characteristics in the population which seemed to contribute to an increased amount of acceptance of exceptional children.

While the work on the Personal Data Questionnaire was in progress conferences were held with administrative officials to secure their permission to solicit the

participation of teachers in the ten selected elementary schools which comprise the present research sample.

Collection of Data

All of the data were collected by group administration of the three instruments previously described. The author of the present research study was always present at the administration of the instruments to the respective teacher staffs of the ten participating schools. The Ancillary Group made up of ten special service personnel served as a pilot group for the first administration of the instruments.

Although the specific instructions and procedures for the administration of the instruments varied somewhat from school to school, the general plan of administration (Appendix D) was approximately uniform for all the schools: (a) a statement of the general organization for administration of instruments; (b) an expression of appreciation for cooperation of the school's teaching staff; (c) a general statement of the purpose of the research study, and (d) an oral explanation of the instruments.

The instruments were administered in the following order:

1. Personal Data Check List
2. Classroom Integration Inventory with IBM
machine answer sheet

3. General Information Inventory with IBM machine answer sheet

Since the teachers were requested to focus their attention on the last five years of teaching experience the responses were limited to the time period between September, 1960 and June, 1965. All data were collected between June 1 and June 18 inclusive at the close of school in the spring of 1965. A letter (Appendix B) from the Administration informed the teachers of the nature of the research and time schedules with the dates and hours for administration were arranged with the principals of the respective schools.

Statistical Procedures

Analysis of Data

Descriptions of the CII Scale and the GII Scale have already been given. The data gathered on these two instruments were analyzed in relationship to the four independent variables, namely: (a) type of teaching contacts, (b) amount of teaching experience, (c) amount of academic credit, and (d) type of consultation experience.

Classroom Integration Scale Analysis

The general scoring procedures used for the CII Scale are described in detail by Vinacke (1952, p. 324) who claims that the Likert (1932) system is easy to use and reliable. The scale described by Haring (1958, p. 31)

as "highly cognitive and self-validating" was a Likert-type (1932, pp. 5-43) acceptance scale adapted to measure attitudes toward the integration of exceptional children in the classroom (Haring, 1958, p. 27). Fifty-nine of the original 60 items on the CII Scale were used to provide data on the degree of realistic acceptance expressed by the respondents in the sample. The method of computing the total Realism Score was explained under Scoring the CII Test. The tests were scored on an IBM machine.

Five scoring keys were punched. The first key contained all of the judges' first choice placements; the second key contained all of the judges' second choice placements; the third key contained all of the judges' third choice placements; the fourth scoring key contained all of the judges' fourth choice placements, and the fifth scoring key contained all of the judges' fifth choice placements of exceptional children for classroom integration. Each respondents' machine scored answer sheet was processed with each of the five scoring keys. The machine counted the number of times the respondent's answers agreed with the ranked choices of the judges. The number of times the respondent agreed with the judges' first choice was multiplied by 5; the number of times he agreed with the judges' second choice was multiplied by 4; the number of times he agreed with the judges' third choice was multiplied by 3; the number of fourth choice

agreements by 2 and the number of first choice agreements by 1. These five figures were then added together to compute the total CII score for one respondent. Since one of the respondents failed to answer the CII test, 153 CII tests were scored. The computed scores were then recorded for data analysis. Respondent identification data, data for the four major independent variables plus the additional exploratory variables, and the total scores and subscores for the dependent variables were all recorded for computer analysis as detailed in the code book (Appendix E).

Data gathered on the CII scale were analyzed for the four major variables in the form of four Analyses of Variance tables: (a) type of experience--Realism Scores; (b) amount of experience--Realism Scores; (c) amount of course work--Realism Scores, and (d) type of consultations --Realism Scores.

General Information Inventory Scale Analysis

The scoring procedures used for the GII Scale were much simpler than the scoring procedures used for the CII Scale. There were 91 multiple choice items. One point was credited to each correct response, thus giving a possible score range of 0-91. These were scored via an IBM machine. Three respondents failed to answer the GII.

Data gathered on the GII Scale were analyzed in relationship with the four major independent variables: (a) type of experience--Knowledge Scores; (b) amount of experience--Knowledge Scores; (c) amount of course work--Knowledge Scores, and (d) type of consultations--Knowledge Scores.

Relationship Between Dependent Variables x

Data gathered on the CII Scale were also analyzed in relation to the data gathered on the GII Scale.

The Pearson Product Moment Correlation was chosen as the most appropriate statistic with which to study the relationship between the degree of realistic acceptance (CII scores) to the amount of knowledge (GII scores) expressed by the respondents, since these two sets of scores represent two continuous variables.

Mean Difference Analyses ✓

Since the measurement problem described above involved the relationship of two continuous dependent variables, namely the Acceptance Scores and the Knowledge Scores with four discrete independent variables, namely: (a) type of teaching contacts, (b) amount of teaching experience, (c) amount of academic credit, and (d) type of consultation experience, a one-way analysis of variance was considered to be the most appropriate statistic for studying the relationships involved.

The UNEQI routine (Ruble, Kiel, Rafter, 1966) was used to calculate the one-way analysis of variance statistics since it is designed to handle unequal frequencies within the various categories. In addition to the F statistic, the frequencies, mean scores and standard deviations are given by the UNEQI program. The approximate significance probability of the F statistic is also included. The UNEQI program contains a provision for designating one or more variables as missing from an observation while listing other variables as non-missing. Although the observation is ignored for all dependent variables with missing values, the observation, instead of being discarded, is used in the analysis of variance for all those dependent variables with non-missing values. The number of missing observations in the respective categories is printed at the end of the table which contains statistics for the categories for each dependent variable. The omitted observations plus the total observations in the problem were expected to equal 154, the total number of observations in the sample.

New Multiple Range Test

Duncan's New Multiple Range Test (Edwards, 1960, pp. 136ff), as extended for unequal replications by Kramer (1960), was used to investigate the extent to which a particular subgroup mean contributes to the total variance represented by the F test. This enables the

researcher to order the group means from high to low and then to examine the "difference" between successive pairs-of-means to ascertain which ones do in fact statistically depart from chance at a stated level of significance.

Level of Significance

The approximate significance probability of the F statistic included in each of the analyses of variance tables is a convenient figure which enables the researcher to know at a glance whether or not the F was significant without referring to a table. For example, if the number printed out was .05, the level of confidence, with the appropriate degree of freedom, for a given F would be .05. However, if .00 was printed out, the level of confidence was to be considered to be .005 or less.

Major Research Hypotheses

Hypotheses Related to Type of Teaching Contacts

H-1a.--Teachers who have had full-time teaching contacts with exceptional children will score significantly higher on the CII Scale than teachers who have had part-time or no teaching contacts with these children.

H-1b.--Teachers who have had full-time teaching contacts with exceptional children will score significantly higher on the GII Scale than teachers who have had part-time or no teaching contacts with these children.

Hypotheses Related to Amount
of Teaching Experience

H-2a.--Teachers who have had extensive full-time contacts with exceptional children will rate significantly higher on the CII Scale than teachers who have had extensive part-time or no experience with exceptional children.

H-2b.--Teachers who have had extensive full-time contacts with exceptional children will rate significantly higher on the GII Scale than teachers who have had extensive part-time or no experience with exceptional children.

H-3a.--Teachers who have had extensive part-time teaching contacts with exceptional children will rate significantly higher on the CII Scale than teachers who have had no teaching contacts with exceptional children.

H-3b.--Teachers who have had extensive part-time teaching contacts with exceptional children will rate significantly higher on the GII Scale than teachers who have had no teaching contacts with exceptional children.

Hypotheses Related to Amount
of Academic Credit

H-4a.--Teachers who have had extensive academic credit in courses pertaining to exceptional children will rate significantly higher on the CII Scale than teachers who have had some or no academic credit in courses pertaining to exceptional children.

H-4b.--Teachers who have had extensive academic credit in courses pertaining to exceptional children will rate significantly higher on the GII Scale than teachers who have had some or no academic credit in courses pertaining to exceptional children.

Hypotheses Related to Type of Consultation Experience

H-5a.--Teachers who have given consultations pertaining to exceptional children will score significantly higher on the CII Scale than teachers who have received periodic consultations or teachers who have had no opportunity for such consultations.

H-5b.--Teachers who have given consultations pertaining to exceptional children will score significantly higher on the GII Scale than teachers who have received periodic consultations or teachers who have had no opportunity for such consultations.

Hypothesis Related to Correlation of Attitude and Knowledge Scores

H-6.--Teachers who score significantly higher on the CII Scale will also score significantly higher on the GII Scale.

Limitation of the Study

Although the two measuring instruments used in this research, namely: the Classroom Integration Inventory and

the General Information Inventory appeared to be the best tests available for the purpose of this study the investigator discovered a limitation at a comparatively late time. Communications were gradually established with all three of the authors of the CII and GII scales but it was not until the data were about to be collected that it was learned that the scoring key for the Classroom Integration Realism Scores was not obtainable.

It was expected that the General Information Inventory would need to have some of its items revised or omitted since some of the questions were outdated. Sorting the items on the GII and securing the answers of expert judges in the respective areas of exceptionality was not nearly as time consuming as the re-establishment of the scoring procedure for the CII realism scores. However, all of the experts on exceptionalities were very cooperative and willing to help with the re-establishment of the new score keys excepting one who stated he "did not have the time to give" to the project.

Assuming that full-time special class public school teachers would rate directionally similar to special education experts (i.e., university professors) it could be argued that the CII realism scores would have little value as a semi-disguised attitude measure for that particular segment of the sample. But since the major portion of the sample is made up of regular class teachers it was assumed

that their CII realism scores might reveal certain patterns of acceptance to study in relationship to their knowledge and experience backgrounds.

CHAPTER IV

ANALYSIS OF THE DATA

This chapter is organized into two sections:

Section 1, the testing of the hypotheses given at the end of Chapter III and Section 2, a tabulation and discussion of the characteristics of these data when the respondents are divided according to: (a) sex, (b) amount of teaching experience, (c) type of teaching experience, (d) amount of academic credit, and (e) amount of consultation experience. The correlation of these major variables with (a) CII realism scores, and (b) GII knowledge scores is also tabulated and discussed.

The Testing of Hypotheses

In this section there are presented eleven hypotheses organized into five main categories relating to: (a) type of teaching contact; (b) amount of teaching experience; (c) amount of academic credit; (d) amount of consultation experience; and (e) correlation of attitude and knowledge scores. Furthermore, two additional propositions were tested: The CII and GII test results in relation to type of school curriculum.

These hypotheses were tested by means of analysis of variance procedures using the Michigan State University CDC 3600 computer program for unequal replications (Ruble, Kiel, Rafter, 1966), and Duncan's New Multiple Range Test (Edwards, 1960, pp. 136ff), as extended for unequal replications by Kramer (1956).

Hypotheses Related to Type of Teaching Contacts

The hypotheses in this section (H-1a and H-1b) are alike excepting that the first hypothesis deals with full-time teaching contacts with exceptional children in relation to attitudes toward their educational placement, whereas the second hypothesis deals with full-time teaching contacts with exceptional children relative to knowledge and understanding (amount of accurate information) held about them.

H-1a.--Teachers who have had full-time teaching contacts with exceptional children will score significantly higher on the CII Scale than teachers who have had part-time or no teaching contacts with these children.

Table 1 reports mean scores, standard deviations, and rankings of means for each group. Table 2 summarizes the analysis of variance calculations.

Table 1 shows that the highest mean rankings were made by the A and N groups. There is very little absolute difference (.63) between the CII mean score of the

TABLE 1.--Means, standard deviations, and mean rankings of classroom integration inventory realism scores for five types of teaching experience.

Type of Experience	N	CII Mean Score	Standard Deviation
N (no experience)	10	225.000	17.889
A (part-time ancillary)	8	225.625	17.361
S (full-time spec. educ.)	19	223.737	19.425
P (part-time regular class)	36	220.972	13.999
R (full-time regular class)	79	217.560	16.564
Ranking of means: A (225.63) > N (225.00) > S (223.74) > P (220.97) > R (217.57)			

ancillary personnel group and the mean score of the eight regular classroom teachers who represent the "no experience" group. The S group had the next highest CII mean score ranking. The R group had the lowest ranking while the P group had next to the lowest ranking on the CII scale. Mean rankings are not consistent with the hypothesis prediction in that the S group has a lower mean score than the A and N groups and the R group has a mean score lower than the P, A, and N groups.

Table 2 reports the analysis-of-variance findings for hypothesis 1a.

TABLE 2.--Analysis-of-variance of classroom integration inventory realism scores for the five types of teaching experience.

Source of Variation	Sum of Squares	D.F.	Mean Square	<u>F</u>	Sign. of <u>F</u>
Between groups	1268.569	4	317.142	1.164	0.33
Within groups	40041.898	147	272.394		
Total	41310.467	151			

As indicated from Table 2 the F statistic for the analysis of variance test was not significant at the .05 level, which suggests that the sub-group means come from a common population. A partial correlation of $-.07$ was obtained between the CII realism scores and type of teaching experience. This negative correlation between attitude toward classroom integration of exceptional children and type of teaching experience supports the findings of "no significant difference" given in Table 2. Hypothesis 1a, therefore, is not supported.

Summary of hypothesis relating type of teaching experience to CII realism scores.--Hypothesis 1a which predicted that teachers who had full-time teaching contacts with exceptional children would have more realistic attitudes toward the educational placement of these children than teachers who had part-time or no teaching contacts with exceptional children was not supported. The

mean ranking of the special education group is consistent with hypothesis 1a in that the S group has a higher mean score on the CII scale than either the P or R groups. It is generally assumed that special education teachers have a more continuous (full-time) contact with exceptional children than regular class teachers. On the other hand, the 10 respondents who represented the "no experience" group had mean scores which outranked all other groups excepting the A group. The position of the N group in relation to both full-time special education teachers and full-time regular class teachers was surprising.

If the findings for hypothesis 1a had been significant rather than being merely directional and the N group larger, it would suggest that groups which have the lesser amounts of contact with exceptional children are more able to make realistic educational placements of these children than teacher groups who have had full-time teaching experiences with them. On the other hand, it was noted that the majority of respondents in the A group were younger than the average age of the other teachers, and thus may have had more recent academic training than the special or regular class full-time teachers. The respondents in the ancillary group also had more academic credit pertaining to exceptional children than any of the other type of experience groups.

H-1b: Teachers who have had full-time teaching contacts with exceptional children will score significantly higher on the GII Scale than teachers who have had part-time or no teaching contacts with these children.

Table 3 reports mean scores, standard deviations, and rankings of means for each group. Table 4 summarizes the analysis of variance calculations. Table 5 contains the calculations for the Multiple Range Test.

TABLE 3.--Means, standard deviations and mean rankings of GII knowledge scores for five types of teaching experience.

Type of Experience	N	GII Mean Score	Standard Deviation
N (no experience)	10	55.900	10.723
A (part-time ancil.)	8	68.625	10.099
S (full-time spec. educ.)	19	60.000	10.536
P (part-time reg. class)	36	50.138	10.645
R (full-time reg. class)	77	52.688	8.987

Ranking of means: A (68.63) > S (60.000) > N (55.90)
> R (52.69) > P (50.14)

Duncan's New Multiple Range Test Results:*

A (68.63) > S (60.00)*	S (60.00) > R (52.69)*
A (68.63) > N (55.90)*	S (60.00) > P (50.14)*
A (68.63) > R (52.69)*	
A (68.63) > P (50.14)*	N (55.90) > P (50.14)*

*Significant at .05 level.

Table 3 reports that the highest mean rankings were made by the A and S groups. The N type-of-experience group had the next highest GII mean score. The P group had the lowest mean ranking while the R group had next to the lowest GII mean score. The findings that the S group has a lower mean score ranking than the A group and the R and P groups have lower mean score rankings than the N group, are not consistent with hypothesis 1b. Table 4 contains the analysis of variance findings for hypothesis 1b.

TABLE 4.--Analysis of variance of GII knowledge scores for five types of teaching experience.

Source of Variation	Sum of Squares	D.F.	Mean Square	<u>F</u>	Sign. of <u>F</u>
Between groups	3099.733	4	774.933	8.112	0.005
Within groups	13851.600	145	95.528		
Total	16951.333	149			

As indicated in Table 4 the F statistic for the analysis of variance test was significant at the .005 level, which suggests that the sub-group means do not come from a common population. However, it is necessary to consider the means of the full-time teacher groups in relation to each of the other groups to determine which groups differ from each other. For this, a test of multiple means is necessary. A discussion of Duncan's test is given in Edwards (1960, pp. 136-140). The effect of the application of the Duncan

test is to increase the level of the t statistic required for a given level of significance between two means as additional means are included in the intervening range. This is demonstrated by the changing values of R'_p of Table 5.

A partial correlation of .12 was obtained between the GII mean scores and type of teaching experience (see Table 30, p. 177).

The data reported in Table 5 support the hypothesis in respect to two of the types of experience groupings. Mean differences in the GII knowledge scores are significant at the .05 level between full-time special education and part-time regular class groupings. While the hypothesis was not supported in respect to the differences predicted between the full-time special education group and the other two types of experience groupings (A and N) it should be noted that the GII knowledge scores are significantly higher at the .05 level between the ancillary group and the special education group in the opposite direction to that which was hypothesized. And although the GII knowledge scores of the full-time regular class (Table 3) are not significantly different from the GII mean scores (Table 5) of the part-time regular class and the no experience groupings, it is important to note that the GII knowledge scores (Table 3) of the ancillary group are significantly different from the GII mean scores of the full-time regular class group in reverse direction to the hypothesized one.

TABLE 5.--Duncan's New Multiple Range Test applied to means of GII knowledge scores for five types of experience.

Range of Mean (p)	2	3	4	5	df=150
Studentized ranged for 5% test (Z_p) ^a	2.77	2.92	3.02	3.09	
R'_p ($R'_p = sz_p, 150$) ^b	27.07	28.53	29.51	30.19	
Mean differences ^c					
$\bar{X}_A - \bar{X}_P$ (p = 5)				66.88*	
$\bar{X}_A - \bar{X}_R$ (p = 4)			60.67*		
$\bar{X}_S - \bar{X}_P$ (p = 4)			49.11*		
$\bar{X}_S - \bar{X}_R$ (p = 3)		40.36*			
$\bar{X}_A - \bar{X}_N$ (p = 3)		36.90*			
$\bar{X}_N - \bar{X}_P$ (p = 3)		32.79*			
$\bar{X}_N - \bar{X}_R$ (p = 2)	13.51				
$\bar{X}_R - \bar{X}_P$ (p = 2)	17.84				
$\bar{X}_S - \bar{X}_N$ (p = 2)	14.84				
$\bar{X}_A - \bar{X}_S$ (p = 2)	28.94*				

* Significant at .05 level of confidence.

^a Taken from Edwards (1960, p. 373).

^b s = the square root of the error mean square of the analysis of variance of Table 4. $s = \sqrt{95.528} = 9.77$
 p = the range of means (2, 3, 4 and 5).

^c Mean difference of columns 2, 3, 4 and 5 have been transformed into the equivalent of t -scores for multiple means. To be significant, the figure must exceed the R'_p value of the same column. The formula given by Kramer (1956) is:

$$\bar{X}_y - \bar{X}_z \sqrt{\frac{2n_y n_z}{n_y + n_z}} / Sz_p, \text{ error d.f. of A of V.} = R'_p.$$

Summary of hypothesis relating type of teaching experience to GII knowledge scores.--Hypothesis 1b, which predicted a significantly greater amount of knowledge (higher scores on GII scale) for teachers who had full-time teaching experience with exceptional children than for teachers with part-time or no teaching experience with exceptional children was partially supported. Full-time special education teachers were found to be significantly better informed (higher GII scores) than the regular class teachers who reported having only part-time teaching experience with exceptional children. Although it was not hypothesized, it is important to note that the ancillary group (part-time group) had a mean score ranking (Table 3) which was significantly higher than the mean score rankings for all of the other groupings (Table 5). Table 5 shows that the GII mean score ranking (Table 3) for the full-time special education group was significantly higher than the GII mean score rankings (Table 3) for the full-time regular class group. On the other hand, Table 5 shows that the full-time special education group was not found to have a GII mean score ranking (Table 3) which was significantly higher than the mean score ranking (Table 3) for the group which reported no teaching experience with exceptional children. In fact, the group which claimed "no teaching experience" with exceptional children was found (Table 5) to have a significantly higher score ranking (Table 3) than

the mean score ranking (Table 3) for the part-time regular class group. Thus, there is no difference in mean score rankings between the S and N groups (Tables 3 and 5).

Table 5 shows that the group which appears to be the most outstanding because of its higher GII mean score ranking (Table 3) is the ancillary personnel group. The ancillary group was comprised of eight therapists and two administrators from special services. The higher GII knowledge scores of the ancillary group may indicate clinical background training and experience with guidance orientation over and beyond that of regular class teachers.

The fact that the GII mean scores of the full-time special education group were significantly higher than the GII mean scores of the full-time regular class teachers (Tables 3 and 5) is of special importance to the present study although it was not included in the hypothesis. In view of the fact that special education teachers usually have more academic credit pertaining to exceptionalities of children and more experience with exceptional children (especially in their respective vocational areas) it is generally assumed by administrators and personnel teacher placement officials that special education personnel have more knowledge pertaining to exceptionalities of children than regular class teachers.

Hypotheses Related to Amount of Teaching Experience

The hypotheses in this section (H-2a, H-2b, H-3a, and H-3b) are designed to define three levels of degrees of contact: no experience, extensive part-time experience, and extensive full-time experience. Hypotheses 2a and 3a deal with the attitudes of teachers while hypotheses 2b and 3b deal with the amount of knowledge expressed by teachers.

H-2a: Teachers who have had extensive full-time contacts with exceptional children will rate significantly higher on the CII Scale than teachers who have had extensive part-time or no experience with exceptional children.

H-3a: Teachers who have had extensive part-time teaching contacts with exceptional children will rate significantly higher on the CII Scale than teachers who have had no teaching contacts with exceptional children.

Table 6 indicates means, standard deviations, and mean rankings for each type-of-teaching experience group. Table 7 summarizes the analysis of variance findings for these means. Table 6 reports mean rankings which are precisely the reverse of the rankings predicted in hypotheses 2a and 3a. The highest mean ranking was made by the N group whereas the lowest ranking was made by the F group.

As shown from Table 7 the F statistic for the analysis of variance was not significant at the .05 level which leads

TABLE 6.--Means, standard deviations, and mean rankings of classroom integration inventory scores for three levels of amount of teaching experience.

Amount of Experience	N	CII Mean Score	Standard Deviation
N (no experience)	8	224.750	9.765
P (extensive part-time experience)	37	222.027	15.101
F (extensive full-time experience)	82	219.366	16.553
Ranking of means: N (224.75) > P (222.03) > F (219.37)			

TABLE 7.--Analysis-of-variance classroom integration inventory realism scores for three levels of amount of teaching experience.

Source of Variation	Sum of Squares	D.F.	Mean Square	<u>F</u>	Sign. of <u>F</u>
Between groups	336.203	2	168.102	0.670	0.52
Within groups	31071.497	124	250.577		
Total	31407.701	126			

one to assume that the sub-group means come from a common population. It was also found that the partial correlation between the CII realism scores and the amount of teaching experience was $-.10$. This negative correlation between the teachers' attitudes toward educational placement of exceptional children lends additional support to the "no

significant difference" findings in Table 7. Hypotheses 2a and 3a were not supported.

Summary of hypotheses relating levels of amount of teaching experience to attitudes of teachers toward educational placement of exceptional children.--Hypothesis 2a, which predicted higher CII realism scores for teachers who have had extensive full-time teaching contacts with exceptional children than for teachers who have had extensive part-time or no teaching experience with exceptional children was not supported. The data of Table 6 is, in fact, reversed from that predicted. The CII mean scores obtained by teachers with extensive full-time experience ranked exactly opposite to the hypothesis prediction. If the analysis of variance (Table 7) had shown a significant difference (rather than merely being "directional") in the CII realism scores of teachers divided according to amount of experience levels, this reversal in ranking of mean scores would suggest that teachers who have had only part-time or no experience with exceptional children will have more realistic attitudes (higher CII realism scores) toward classroom integration of them than teachers who have had full-time experience.

Hypothesis 3a, which predicted higher CII realism scores for teachers who have had extensive part-time teaching contacts with exceptional children than for teachers who have had no teaching contacts with them was also not

supported. As was just pointed out in the summary of hypothesis results for 2a, the ranking of the means scores (Table 6) took the exact opposite of the predicted ranking in hypotheses 2a and 3a. While lacking statistical significance, there is a trend which suggests that teachers who have had a lesser amount of teaching experience with exceptional children would express more realistic attitudes (higher CII realism scores) toward classroom integration of these children than teachers who have had more years and a more continuous teaching contact with exceptional children.

Hypotheses 2b and 3b are similar to hypotheses 2a and 3a excepting that hypotheses 2b and 3b deal with the GII mean scores rather than with the CII mean scores.

H-2b: Teachers who have had extensive full-time contacts with exceptional children will rate significantly higher on the GII Scale than teachers who have had extensive part-time or no experience with exceptional children.

H-3b: Teachers who have had extensive part-time teaching contacts with exceptional children will rate significantly higher on the GII Scale than teachers who have had no teaching contacts with exceptional children.

Table 8 reports mean scores, standard deviations, and rankings of means for each teacher group categorized according to amount of experience. Table 9 summarizes the analysis of variance calculations.

TABLE 8.--Means, standard deviations and mean rankings for general information inventory scores for three levels of amount of teaching experience.

Amount of Experience	N	GII Mean Score	Standard Deviation
N (no experience)	8	55.000	9.928
P (extensive part-time)	36	55.111	10.422
F (extensive full-time)	81	53.728	10.644
Ranking of means: N (55.00) > P (55.111) > F (53.73)			

As shown from Table 8 the differences in GII mean scores appear to be negligible. It is of interest to note, however, that the full-time experience group have a mean score which ranks a little below both the part-time and the no experience teacher groups.

TABLE 9.--Analysis-of-variance for general information inventory knowledge scores for three levels of amount of teaching experience.

Source of Variation	Sum of Squares	D.F.	Mean Square	<u>F</u>	Sign. of <u>F</u>
Between groups	53.012	2	26.51	0.24	0.79
Within groups	13555.580	122	111.11		
Total	13608.592	124			

As indicated from Table 9 the F statistic for the analysis of variance was not significant at the .05 level, thus it is reasonable to assume that the sub-group means come from a common population. In addition, the partial correlation between the amount of knowledge pertaining to exceptional children and the amount of teaching experience was small and insignificant. Hypotheses 2b and 3b were not supported.

Summary of hypotheses relating levels of amount of teaching experience to amount of accurate information pertaining to exceptional children.--Hypothesis 2b, which predicted higher GII scores for teachers who have had extensive full-time teaching experience with exceptional children than for teachers who have had extensive part-time or no teaching experience with them was not supported. Nevertheless the ranking of the mean scores given in Table 8 attracts special attention. The GII mean score (amount of knowledge pertaining to exceptional children) obtained by teachers with extensive full-time experience ranked exactly opposite to the prediction of hypothesis 2b. Had the results from the analysis of variance (Table 9) indicated a significant difference among the GII mean scores of respondents groups according to amount of teaching experience, the reversal in mean score ranking would suggest that teachers who have had only part-time or no teaching experience with exceptional children will have more knowledge and understanding (higher GII scores) of them

than teachers who have had extensive full-time experience with exceptional children.

Hypothesis 3b, which predicted higher GII knowledge scores for teachers who have had extensive part-time teaching experience with exceptional children than for teachers who have had no teaching contacts with them was not supported. It is unnecessary to go into detail concerning the reversal of mean score ranking in Table 8 since it has already been described in the summary of hypothesis results for 2b. Table 8 reports a GII mean score difference between the no experience group and part-time experience which appears to be negligible, yet the reversal in ranking suggests that teachers who have had a lesser amount of teaching experience with exceptional children will know more about them than experienced teachers.

Hypotheses Related to Amount of Academic Credit

H-4a: Teachers who have had extensive academic credit in courses pertaining to exceptional children will rate significantly higher on the CII Scale than teachers who have had some or no academic credit in courses pertaining to exceptional children.

Since this hypothesis was partially confirmed it was tested with the same procedures as were used for testing hypothesis 1b. Table 10 reports mean scores, standard deviations, and rankings of means for each group of respondents divided according to three levels of amount

of academic credit. Table 11 summarizes the analysis of variance calculations. Table 12 contains calculations for the Multiple Means Test.

TABLE 10.--Means, standard deviations and mean rankings of classroom integration inventory realism scores for three levels of amount of academic credit.

Amount of Academic Credit	N	CII Mean Score	Standard Deviation
N (no credit)	20	220.250	12.818
S (some credit)	69	215.275	16.391
Ex (extensive credit)	57	225.263	17.277
Ranking of means: Ex (225.26) > N (220.25) > S (215.28)			
Duncan Test Results: Ex (225.26) > S (215.28)			

Table 10 shows larger intervals between the CII mean scores than do Tables 1 and 6. The fact that these differences in mean score rankings showed a significant difference at the .005 level is confirmed by the significance of the F statistic reported in Table 11. Thus it appears that the sub-group means do not come from a common population. This does not, however, support per se the hypothesis in respect to the extensive credit-level group in relation to each of the other two groups taken alone. In order to determine the relationship of the group having an extensive credit-level background to the group with some credit-level background and to the group with no credit-level

TABLE 11.--Analysis of variance of classroom integration inventory realism scores for three levels of amount of academic credit.

Source of Variation	Sum of Squares	D.F.	Mean Square	<u>F</u>	Sign. of <u>F</u>
Between groups	3117.409	2	1558.70	5.849	.005
Within groups	38106.571	143	266.480		
Total	41223.979	145			

background, a test of multiple mean comparisons is necessary.

The data shown in Table 12 support hypothesis 4a in respect to the relationship of teachers who have had extensive academic credit and teachers who have had some credit. The mean score difference between the teacher group with extensive academic credit and the teacher group with some credit shows that the group with the most credit will have more realistic attitudes (higher scores on the CII) toward the educational placement of exceptional children than teachers who have "some" credit. It is rather surprising then to note that the group of teachers which had "some" credit were outranked by the mean score of the teacher group which had "no" credit. The "no" credit group was made up of 20 regular classroom teachers so there is no explanation for this outcome other than the fact that the "no" experience group contained only 17 percent of the regular classroom teachers.

TABLE 12.--Duncan's New Multiple Range Test applied to means of classroom integration inventory realism scores for three levels of amount of academic credit.

Range of Means (p)	2	3	df=146
Studentized ranges for 5% test (Z_p) ^a	2.77	2.92	
R'_p ($R' = sz_p \sqrt{146}$) ^b	45.25	47.66	
Mean differences ^c			
$X_{Ex} - X_s$ (p = 3)		79.01*	
$X_{Ex} - X_n$ (p = 2)	27.35		
$X_n - X_s$ (p = 2)	27.70		

*Significant at .05 level of confidence.

^aTaken from Edwards (1960, p. 373).

^b s = the square root of the error mean square of the analysis of variance of Table 11.

$$s = \sqrt{266.4795} = 16.324$$

p = the range of means (2 and 3).

^cMean differences of columns 2 and 3 have been transformed into the equivalent of t -scores for multiple means. To be significant, the figure must exceed the R'_p value of the same column. The formula given by Kramer (1956) is:

$$X_y - X_z \sqrt{\frac{2 n_y n_z}{n_y + n_z}} > sz_p, \text{ error d.f. of A. of V.} \\ = R'_p.$$

In addition to the significant difference between the CII mean scores of teachers with extensive academic credit backgrounds and the mean scores of teachers with some or no course work credit pertaining to the exceptionalities of children (Tables 10 and 12), the partial correlation between these variables was $.18^1$ ($< .05$), thus emphasizing a positive relationship between level of amount of academic credit pertaining to exceptionalities and amount of knowledge (GII scale) pertaining to exceptional children.

Summary of hypothesis relating amount of academic credit to CII realism scores.--Hypothesis 4a, which predicted a significantly greater amount of realistic attitude toward the educational placement of exceptional children (higher CII scores) among teachers who have had extensive academic credit than for teachers who have had some or no academic credit pertaining to exceptional children was partially supported. Table 12 indicates that the teacher group having extensive academic credit has a significantly higher mean score on the CII test than the teacher group having some academic credit. Duncan's New Multiple Range Test (Table 12) also shows that the teacher group which

¹Wilfred J. Dixon and Frank J. Massey, Jr. Introduction to Statistical Analysis, 1957, p. 468. Table A-30a "Percentiles of the Distribution of r , When $p = 0$." This table indicates that r for 150 cases needs $.134$ or greater to be significant at the $.05$ level.

has an extensive amount of academic credit does not even approach the .05 level of significance in relation to the teacher group with "no" academic credit. To be significant the difference in the means of these two teacher groups must exceed the appropriate R_p significant range factor. The results of the Duncan's test were 27.35, whereas it needed to be 45.25 to be significant at the .05 level.

The fact that the mean score of the "no" academic credit group ranked above that of the teacher group with "some" academic credit was not consistent in view of the supported hypothesis 4a. Since the elevation of the mean score for the N group over the mean score for the S group is not a significant difference it need not be accounted for. Had the number of respondents who reported "no" academic credit been equal to the number of respondents in either of the other two categories one might be justified in the use of the old adage: "A little learning is a dangerous thing"!

H-4b: Teachers who have had extensive academic credit in courses pertaining to exceptional children will rate significantly higher on the GII Scale than teachers who have had some or no academic credit in courses pertaining to exceptional children.

Since this hypothesis was partially confirmed it was tested with the same procedures as were used for testing hypotheses 1b and 4a. Table 13 reports mean

scores, standard deviations, and ranking of means for each group of respondents divided according to three credit-level categories. Table 14 summarizes the analysis of variance calculations. Table 15 contains calculations for the Multiple Range Test.

TABLE 13.--Means, standard deviations and mean rankings for general information inventory scores for three levels of amount of academic credit.

Amount of Academic Credit	N	GII Mean Scores	Standard Deviation
N (no credit)	20	52.100	8.497
S (some credit)	67	52.537	8.960
Ex (extensive credit)	56	57.161	12.324
Ranking of means: Ex (57.16) > S (52.54) > N (52.10)			
Duncan Test Results: Ex (57.16) > S (52.54)			

The ranking of the means in Table 13 corresponds to the prediction given in hypothesis 4b. The 56 respondents with extensive academic credit backgrounds had higher mean scores on the GII knowledge test than the S and N credit level groups. The difference in the mean score of the teacher group with some academic credit and the mean score of the teacher group with no credits pertaining to exceptional children is negligible even though the N group does have the lowest mean score ranking in Table 13.

TABLE 14.--Analysis of variance of general information
venentory knowledge scores for three levels of amount of
academic credit.

Source of Variation	Sum of Squares	D.F.	Mean Square	<u>F</u>	Sign. of <u>F</u>
Between groups	763.234	2	381.617	3.556	.03
Within groups	15024.010	140	107.314		
Total	15787.245	142			

Table 14 reports the analysis of variance results. The obtained F is significant at the .03 level. Table 13 shows mean score ranking for the S and N group to be very close. The multiple mean comparisons in Table 15 indicates that Ex is significantly greater than S at the .03 level of confidence and approaches the .05 level of significance in relation to the N group. To be significant the difference in the means of the Ex and N groups must exceed the appropriate R_p significant range factor. The results of the Duncan's test were 27.47 whereas the test result needed to exceed $R_3 = 30.23$ in order to be significant at the .05 level of confidence.

Summary of hypothesis relating amount of academic credit to GII knowledge scores.--Hypothesis 4b, which predicted a significantly greater amount of knowledge and understanding of exceptional children (higher GII scores) among teachers who have had extensive academic credit pertaining to exceptional children than for teachers who

TABLE 15.--Duncan's New Multiple Range Test applied to means of general information inventory knowledge scores for three levels of amount of academic credit.

Range of Means (p)	2	3	df=140
Studentized ranges for 5% test (Z_p) ^a	2.77	2.92	
R'_p ($R' = sz_p, 140$) ^b	28.72	30.23	
Mean differences ^c			
$\bar{X}_{Ex} - \bar{X}_n$ (p = 3)		27.47	
$\bar{X}_{Ex} - \bar{X}_s$ (p = 2)	36.11*		
$\bar{X}_s = \bar{X}_n$ (p = 2)	2.43		

*Significant at .05 level of confidence.

^aTaken from Edwards (1960, p. 373).

^b s = the square root of the error mean square of the analysis of variance of Table 14.

$$s = \sqrt{107.314} = 10.359$$

p = the range of means (2 and 3).

^cMean differences of columns 2 and 3 have been transformed into the equivalent of t -scores for multiple means. To be significant, the figure must exceed the R'_p value of the same column. This was accomplished by use of the rationale supplied by Kramer (1956), and the formula:

$$\bar{X}_y - \bar{X}_z \sqrt{\frac{2 n_y n_z}{n_y + n_z}} > sz_p, \text{ error d.f. of A. of V.} \\ (= R'_p).$$

have had some or no academic credit was partially confirmed at the .05 level of confidence. In addition to the significant difference found between the GII mean scores of teachers with extensive academic background pertaining to exceptional children and teachers with some academic background pertaining to exceptionalities of children, the partial correlation obtained between these two variables was .20. Table 15 not only shows the teachers with extensive academic credit; it also shows that the higher scores of the Ex group (Table 13) approach the .05 level of significance in relation to the N group (Table 15). To be significant the difference in the means of the Ex and N groups must exceed the R_3 appropriate significant range factor. The results of the Duncan's New Multiple Range test as shown in Table 15 were 27.47. In order to be significantly different at the .05 level it should have been 30.23.

The respondents who represented the "no academic credit" group were 20 regular classroom teachers. Since this was a small, self-selected group it is "understandable" that their mean score could tend to run higher than the GII mean scores of a comparable (no experience) group with twice or three times as many respondents.

Hypotheses Related to Three
Levels of Amount of
Consultation

H-5a: Teachers who have given consultations pertaining to exceptional children will score significantly higher on the CII Scale than teachers who have received periodic consultations or teachers who have had no opportunity for such consultations.

Table 16 reports mean scores, standard deviations, and rankings of means for each teacher group divided according to level of amount of consultations. Table 17 summarizes the analysis of variance calculations for hypothesis 5a.

TABLE 16.--Means, standard deviations and mean rankings of classroom integration inventory realism scores for three levels of amount of consultation.

Amount of Consultation	N	CII Mean Score	Standard Deviation
N (no consultations)	13	217.000	15.116
P (receive periodic consultations)	92	219.152	16.792
C (give consultations)	27	224.259	19.154
Ranking of means: C (224.26) > P (219.15) > N (217.00)			

Table 16 shows a mean ranking which appears to be consistent with the predicted ranking in hypothesis 5a. The respondents who give consultations have the highest mean score ranking on the CII realism scores and the

respondent group with no consultation background pertaining to the problems of exceptional children has the lowest mean scores ranking on CII realism score.

TABLE 17.--Analysis-of-variance of classroom integration inventory realism scores for three levels of amount of consultation.

Source of Variation	Sum of Squares	D.F.	Mean Square	<u>F</u>	Sign. of <u>F</u>
Between groups	672.915	2	336.457	1.197	0.31
Within groups	36265.005	129	281.124		
Total	36937.970	131			

Table 17 shows that the F statistic for the analysis of variance test was not significant at the .05 level, which suggests that the sub-group means come from a common population.

Summary of hypothesis relating amount of consultation experience to CII realism scores.--Hypothesis 5a, which predicted that teachers who gave consultations pertaining to exceptional children would have more realistic attitudes toward the educational placement of these children (higher scores on the CII scale) than teachers who received periodic consultations or teachers who had no opportunity for such consultations was not supported. Table 16 reports a ranking of the means which is consistent with the ranking implied by hypothesis 5a but the analysis of variance

indicated the differences between the CII mean scores to be non-significant at the .05 level of confidence. In addition, the partial correlation between the CII realism scores and the giving of consultations pertaining to exceptionalities of children was small and insignificant (.11).

H-5b: Teachers who have given consultations pertaining to exceptional children will score significantly higher on the GII Scale than teachers who have received periodic consultations or teachers who have had no opportunity for such consultations.

Table 18 reports mean scores, standard deviations, and rankings of means for each type of consultation category. Table 19 reports the summarized calculations for the analysis of variance findings. Table 20 contains the multiple means test calculations.

TABLE 18.--Means, standard deviations and mean rankings of general information inventory knowledge scores for three levels of amount of consultation experience.

Amount of Consultation Experience	N	GII Mean Score	Standard Deviation
N (no consultations)	13	52.615	8.231
P (receive periodic consultations)	89	52.584	10.30
C (give consultations)	27	62.222	10.628
Ranking of Means: C (62.22) > N (52.62) > P (52.58)			
Duncan Test Results: C (62.22) > P (52.58); C (62.22) > N (52.62)			

Table 18 gives a ranking of the mean scores of the general inventory which agrees with the prediction made in hypothesis 5b. Teachers who have given consultations pertaining to exceptional children have a higher GII means score than either the P or the N group of respondents.

TABLE 19.--Analysis of variance of general information inventory knowledge scores for three levels of amount of consultation experience.

Source of Variation	Sum of Squares	D.F.	GII Mean Square	<u>F</u>	Sign. of <u>F</u>
Between groups	1981.476	2	990.738	9.545	.005
Within groups	13077.362	126	103.789		
Total	15058.837	128			

As indicated from Table 19, the F statistic for the analysis of variance test was significant at the .005 level.

Summary of hypothesis relating levels of amount of consultation experience to amount of accurate information (GII knowledge scores) expressed by the respondents.--Hypothesis 5b, which predicted a greater amount of accurate information pertaining to exceptional children (higher GII scores) for teachers who have given consultations pertaining to exceptional children than for teachers who have received periodic consultations or teachers who have had no opportunity for such consultations was fully confirmed. Table 20 indicates that respondents who have given

TABLE 20.--Duncan's New Multiple Range Test applied to means of general information inventory knowledge scores for three levels of amount of consultation experience.

Range of Means (p)	2	3	df=126
Studentized ranges for 5% test (Z_p) ^a	2.77	2.92	
R'_p ($R' = sz_p, 126$) ^b	28.24	29.67	
Mean Differences ^c			
$\bar{X}_c - \bar{X}_p$ (p = 3)		63.03*	
$\bar{X}_c - \bar{X}_n$ (p = 2)	40.20*		
$\bar{X}_n - \bar{X}_p$ (p = 2)	.15		

*Significant at .05 level of confidence.

^aTaken from Edwards (1960, p. 373).

^b s = the square root of the error mean square of the analysis of variance of Table 19.

$$s = \sqrt{103.789} = 10.187$$

p = the range of means (2 and 3).

^cMean differences of columns 2 and 3 have been transformed into the equivalent of t -scores for multiple means. To be significant, the figure must exceed the R' value of the same column. This was accomplished by use of the rationale supplied by Kramer (1956, and the formula:

$$\bar{X}_y - \bar{X}_z \sqrt{\frac{2 n_y n_z}{n_y + n_z}} > sz_p, \text{ error df. of anal. of var. } (= R'_p).$$

consultations pertaining to exceptional children have a significantly greater amount of accurate information (higher GII scores) about these children than teachers who have received periodic consultations pertaining to exceptional children. Table 20 also shows that teachers who have given consultations pertaining to exceptional children express a significantly greater amount of accurate information about them than do teachers who have had no opportunity for discussing the problems of their exceptional children with a specialist in the particular area of the involvement.

The significant difference between the GII mean scores of the teachers who give consultations pertaining to exceptionalities of children and the mean scores of teachers who have either periodic consultations or no consultations concerning exceptional children is supported by a correlation of .34; revealing a positive relationship between amount of consultations given and amount of knowledge pertaining to exceptional children.

Hypothesis Related to Correlation of Attitude and Knowledge Scores

H-6: Teachers who score significantly higher on the CII Scale will also score significantly higher on the GII Scale.

In this hypothesis the Pearson Product Moment Correlation was chosen to study the relationship of the amount of accurate information concerning exceptional children

(GII knowledge scores) and the attitude toward educational placement of exceptional children (CII realism scores) expressed by the respondents, since these two sets of scores are postulated to represent two continuous variables.

Summary of hypothesis relating amount of knowledge (GII scores) to amount of realistic attitude toward educational placement (CII scores) expressed by the respondents.--Hypothesis 6 which predicted that teachers who score significantly higher on the GII scale (have a significantly greater amount of accurate information) will also score significantly higher on the CII scale (have a significantly more realistic attitude toward educational placement) was supported. And since the two variables are positively related, teachers who score high on one of the tests (GII or CII) will tend to score high on the other. Thus realistic acceptance of educational placement of exceptional children and amount of knowledge and understanding of exceptionalities of children tend to go hand-in-hand but not in a one-to-one manner.

Testing of two additional propositions: CII and GII test results in relation to type of school.--

Question I: Do the teachers from the five schools which enrolled the greatest number of exceptional children (schools with special education programs) have a significantly greater amount of realistic acceptance for

exceptional children than teachers from the five schools which have the least number of exceptional children (schools without special education programs) on their rolls?

Table 21 reports mean scores, standard deviations, and rankings of means for each group of schools. Table 22 summarizes the analysis of variance calculations.

TABLE 21.--Means and standard deviations of classroom integration inventory for schools with (S) and schools without (R) special education programs.

Type of School	N	Mean Score	Standard Deviation
S (with special education programs)	92	217.609	16.701
R (without special education programs)	57	222.474	15.527
Ranking of means: R (222.47) > S (217.61)			

Table 21 reveals that the five schools without special education programs have a higher CII mean score ranking than the five schools with special education programs.

However, Table 22 shows that the obtained F statistic of 3.15 is not significant at the .05 level of confidence; therefore, Question number one must be answered in the negative at the .05 level. However, the significance of .09 is quite close to the chosen level of confidence. At

TABLE 22.--Analysis of variance of classroom integration inventory realism scores for schools with and schools without special education programs.

Source of Variation	Sum of Squares	D.F.	Mean Square	<u>F</u>	Sign. of <u>F</u>
Between groups	832.991	1	832.991	3.149	0.09
Within groups	38882.124	147			
Total	39715.114	148			

a .10 level of confidence the analysis of variance test results would indicate that the CII mean score rankings shown in Table 21 are significantly different in favor of the five schools without special education rooms. An outcome of this nature would suggest that teachers from the schools in which there was the least amount of opportunity for contact with special education programs had significantly more realistic attitudes toward educational placement of exceptional children than teachers from schools which provided the most opportunity for contact with special education programs.

GII test results in relation to type of schools.--

Question II: Do the teachers from the five schools which enrolled the greatest number of exceptional children have a significantly greater amount of knowledge concerning exceptional children than the teachers from the five schools which enrolled the least number of exceptional children?

Table 23 reports mean scores, standard deviations, and rankings of means for each group of schools. Table 24 summarizes the analysis of variance calculations.

TABLE 23.--Means and standard deviations of classroom integration inventory for schools with special education and schools without special education programs.

Type of School	N	GII Mean Score	Standard Deviation
S (with special education)	90	53.578	10.580
R (without special education)	57	53.860	10.202
Ranking of means: R (53.86) > S (53.58)			

Table 23 shows that the difference between GII mean score ranking of the teachers from the schools without special education programs and the GII mean score of teachers from the schools with special education programs is negligible.

TABLE 24.--Analysis of variance of general information inventory knowledge scores for schools with special education and schools without special education programs.

Source of Variation	Sum of Squares	D.F.	Mean Square	F	Sign. of <u>F</u>
Between groups	2.773	1	2.773	0.025	0.85
Within groups	15790.833	145	108.902		
Total	15793.605	146			

Table 24 indicates that the F statistic is definitely not significant at the .05 level; thus Question number two must be answered in the negative. In summary, the GII mean score rankings of teachers from the schools with special education programs are not significantly different from the GII mean score of the teachers from the five schools which had no special education programs.

Summary of classroom integration inventory and general information inventory test results in relation to opportunity for teacher contact with exceptional children.--At the .05 level of confidence there were no significant differences found, in attitudes toward educational placement (CII scores) or amount of knowledge about exceptionalities of children (GII scores), between teachers from schools which had established special education programs and teachers from schools which had no special education programs for exceptional children. It must be mentioned, however, that the group of schools classified as having "no special education programs" were serviced by itinerant personnel such as the speech correctionists, social workers, and psychologists. It was of special interest to the investigator that there was a much greater gap in the attitudes (CII scores) for these two teacher groupings than there was in the amount of knowledge (GII scores) expressed by teachers from the two types of schools.

Comparative Analysis of
Characteristics of
Teachers

The previous section has tested the hypotheses and reported the findings. This section of the chapter tabulates and interprets data which is deemed to be relevant to the major variables in the present study. The characteristic patterns of prediction are examined within each grouping when the respondents are classified according to type of experience, amount of experience, amount of course work, and amount of consultation experience. The correlation of the major independent variables with the two major dependent variables are also tabulated and discussed.

This section of the chapter presents the data for discussion in the following sequence: (a) frequency distribution of 154 respondents in the total sample according to sex and type of teaching position, (b) amount of teaching experience, sex and teaching position characteristics of respondents reporting, "no teaching experience with exceptional children," (c) characteristics of respondents when grouped according to teaching position, (d) characteristics of respondents reporting: "no teaching experience with exceptional children," "No academic credit pertaining to exceptionalities of children," and "no consultations about exceptionalities of children," (e) comparison of characteristics of respondents from two types of schools, and (f) comparison of correlations of five selected variables with CII realism scores and GII knowledge scores.

TABLE 25.--Distribution of 154 respondents (total sample) according to sex and type of teaching position.

	Special Class	Regular Class	Student Teacher	Ancillary Personnel	Total
Frequency	18	120	6	10	154
Female %	89	92	100	70	90
Male %	11	8	0	30	10
% of Total	12	78	4	6	100

Comparison of Four Types of
Teaching Positions in Re-
lation to Frequency Distri-
bution and Sex Characteristics
of 154 Teacher Respondents

The representative sample of 154 teacher respondents contained a 90 percent female and only a 10 percent male population, as is indicated in Table 25. Each type of teaching experience group, although predominantly female in character, differs from each of the other groups in respect to the amount of male teacher respondents contained in that particular group; viz., only eight percent of the 120 regular class teachers were male and 11 percent of the 18 special education class teachers were male, whereas 30 percent of the 10 ancillary personnel were male respondents. The six student teachers were 100 percent female, thus that group was characterized by an absence of male respondents. The group of 120 regular class teachers, which constituted 78 percent of the entire sample, was 92

percent female. The group of 18 special class teachers, 12 percent of the entire sample, were 89 percent female. The ten ancillary personnel, with the highest percentage of males, comprised 7 percent of the entire sample. The smallest group, however, consisted of the six female student teachers; 4 percent of the 154 respondents in the total sample. In summary, it was noted that the regular class teacher group, which had the highest amount of representation in the entire sample, had next to the lowest percent of male respondents in its respective group.

TABLE 26.--Type of teaching position and sex identification for 10 respondents reporting, "no teaching experience with exceptional children" divided according to two levels of number of years taught.

Years Taught	Regular Class %		Student Teacher %		Ancillary Personnel %		Group Totals %	
	M	F	M	F	M	F	M	F
10+	0	50	0	0	0	0	0	50
-10	10	20	0	10	10	0	20	30
Totals	10	70	0	10	10	0	20	80

Characteristic distribution of the 10 respondents reporting "no teaching experience with exceptional children".--The data in Table 26 indicate that the 10 respondents reporting "no teaching experience with exceptional children" are distributed among all three types

of teaching experience positions--the regular class, the student teacher and the ancillary. By referring to the "group totals" column of Table 26 it can be seen that 80 percent of the 10 respondents are female and 20 percent are male. The male respondents belong to the regular class and ancillary group and have had less than 10 years of teaching experience. The female respondents are distributed among the regular class and student teacher group. In the regular class 50 percent of the female group represent the segment of the group with more than 10 years teaching experience and 20 percent of the 10 respondents represent the regular class teachers with less than 10 years teaching experience. The student teacher group had one respondent who reported no teaching experience with exceptional children.

To summarize, it can be said that 80 percent of the respondents, who described themselves as having no experience in teaching exceptional children, are regular class teachers and a majority are women.

Characteristics of 152 Teacher
Respondents Divided According
to Type of Teaching Experience
Position

Table 27 presents data for six variables when grouped by four types of teaching experience positions. The interpretation of the data is discussed in sequential order as presented in Table 27.

TABLE 27.--Comparison of group magnitude, sex characteristics, years of teaching experience, type of teaching experience, amount of academic credit, and amount of consultation experience for 152 questionnaire respondents when divided according to type of teaching experience position.

Teaching Experience	Number Respondents %		Sex %	Number Years Taught %	Type Tch. Exp. with Exc. Child. %			Amt. Credit Except. Child. %			Consultation on Except. Child. %		
	N	F	F	-10	N	P	F	N	S	Ex	N	R	G
Spec. C. T.	12	89		56	0	0	100	0	6	94	6	6	89
Misc. Data	--	--		6	--	--	--	--	--	--	--	6	--
Reg. C. T.	78	92		51	7	26	65	16	54	25	9	72	3
Misc. Data	--	--		11	--	2	--	--	4	--	--	16	--
Stu. Tch.	4	100		100 ^d	10	90	0	0	67	33	50	33	17
Ancil. P.	7	70		60	10	80	10	10	10	80	0	20	80

^aN = none; P = part-time; F = full-time.

^bN = none; S = some; Ex = extensive.

^cN = none; R = receive; G = give.

^dLess than 1 year.

Magnitude of four types of teaching experience groups.--

Table 27 shows that 78 percent of the sample of 152 respondents are regular class teachers. The special class teachers who represent the group with the next largest number of respondents to the questionnaire comprises 12 percent of the 152 teachers. The other two groups--the ancillary personnel and the student teachers were much smaller with only 7 and 4 percent respectively.

Sex of teacher in relation to type of teaching experience.--In Table 27 one can see that all of the types of teaching experience groups are predominantly female with the regular class teacher group including the largest percent of female and the ancillary group the largest percent of male members. This is also discussed under Table 25.

Characteristics of four teaching experience positions in terms of number of years taught.--A glance at Table 27 offers data which indicates that the ancillary and student teacher groups have the largest percentages of respondents who reported having less than ten years of teaching experience. The special class teachers were found to be next--with 56 percent of their teaching position group reporting less than 10 years of teaching experience. But since there were 6 percent missing data on the number of years taught by the respondents in the special education group it is probable that only 50 percent of the special class teachers had under 10 years of experience. On the other hand, it is probable that there were more than 56 percent of the special

class teachers who had taught less than 10 years. The data shows that 51 percent of the regular class teachers reported having less than 10 years teaching experience. It also shows that 11 percent of the data is missing, therefore it was impossible to conclude whether or not the majority of regular class teachers had taught less or more than 10 years.

In summarization of the data pertaining to the percentage of each teaching experience group with less than 10 years of teaching experience, it was concluded that the student teacher and ancillary groups were characterized by much less teaching experience than either the special class or the regular class teachers.

Characteristics of respondents from four types of teaching positions according to type of teaching experience background.--Using Table 27 as a reference it can be seen that 100 percent of the special class, 65 percent of the regular class, and 20 percent of the ancillary teacher groupings reported "full-time" teaching experience with exceptional children. A part-time teaching experience was reported by 90 percent of the student teachers, 80 percent of the ancillary personnel, and by 26 percent of the regular class teachers. The only respondents reporting "no teaching experience" with exceptional children were 10 percent of the ancillary, 10 percent of the student teacher, and 7 percent of the regular class teaching groups.

The data descriptive of type of teaching experience background indicates that 65 percent of the regular class teachers are aware of their full-time teaching responsibility for exceptional children in their classrooms, whereas none of the ancillary and student teacher respondents report having full-time responsibility for the educational program of an exceptional child. As would be expected, all of the special education class teachers recognize their teaching position as one which has full-time responsibility for exceptional children. The investigator has reason to believe that the ancillary personnel who reported "no experience" with exceptional children misunderstood the term "teaching" because all of the ancillary personnel are known to have worked with exceptional children; clinically, at least.

Characteristics of respondents from four types of teaching positions divided according to three levels of amount of academic credit.--By referring to Table 27 the reader can see data which indicate that 94 percent of the special class, 80 percent of the ancillary, 33 percent of the student teachers, and 25 percent of the regular class teachers reported "extensive credit" pertaining to exceptionalities of children. "Some credit" pertaining to exceptionalities was reported by 67 percent of the student teachers, 54 percent of the regular class teachers, 10 percent of the ancillary, and 6 percent of the special education class teachers. There were 16 percent of the

regular class teachers and 10 percent of the ancillary personnel who reported "no credit" in coursework pertaining to exceptional children.

In summary, it can be concluded that the special class teachers and ancillary personnel had more extensive educational backgrounds pertaining to exceptionalities of children than either the student teachers or the regular class teachers. In fact, the small student teacher group provided data which implies that the student teacher group had taken more academic courses pertaining to exceptionalities of children than the group of regular class teachers. And if the data, which indicates that 16 percent of the regular class teachers and 10 percent of the ancillary have had "no academic credit" in courses pertaining to exceptionalities of children, is true--it most certainly reveals a serious gap in the educational preparation of the respondents.

Characteristics of respondents from four types of teaching positions according to amount of consultation experience.--Data in Table 27 shows that 89 percent of the special class, 80 percent of the ancillary, 17 percent of the student teacher, and 3 percent of the regular class teachers reported, "consultations given." Respondents reporting "consultations received" were 72 percent of the regular class, 33 percent of the student teachers, 20 percent of the ancillary, and 6 percent of the special class teachers. "No opportunity for consultations" was

reported by 50 percent of the student, 9 percent of the regular class, and 6 percent of the special class teachers.

An inspection of the comparative data shown in Table 27 concerning the amount of consultation experience possessed by the respondents from four different teaching experience positions revealed several findings of particular importance. The percentages found in the "G" column of Table 27 provides evidence which suggests that both ancillary and special class respondents can be characterized as teachers who "give" consultations whereas the regular class respondents can be characterized as teachers who "receive" consultations. And although 50 percent of the student teacher group reported, "no opportunity" for consultations pertaining to exceptionalities of children, the data indicate that more of the student teachers "receive" than "give" consultations of this kind.

Summary of comparative data relating relevant background data to four types of teaching experience positions.--
The comparative summary of data relating certain selected variables to specific types of teaching experience positions brings several concepts into focus. It is clearly recognized that the groups range in size from 118 respondents in the regular class group to only 6 respondents in the student teacher group. Using "number of years taught" as the criteria it was judged that the ancillary and special class groups tend to have a younger membership than the regular class group. The two latter groups also have a

larger percentage of male members than the regular class group. The regular class respondents reported an amount of full-time experience with exceptional children which ranked next to special class teachers yet it was the special class teacher and ancillary groups who reported the largest amounts of academic credit pertaining to exceptionalities of children and background experience in giving consultations about exceptionalities of children.

Characteristics of Respondents
Reporting the Minimal Amount of:
Teaching Experience with Ex-
ceptional Children, Academic
Credit Pertaining to Exception-
alities of Them and Consultations
About Exceptionalities of Children

An inspection of the "teaching position" and "frequency" columns of Table 28 discloses that 39 of the 46 respondents, reporting that they have had no teaching experience with exceptional children and no academic credit or consultations pertaining to exceptionalities of children, are regular class teachers. It is also apparent that the "self-appointed" groups set forth in Table 28 are predominantly female in character with a teaching experience ranging from less than one year for student teachers to more than 10 years for the group reporting "no consultation" experience. The characteristics of respondents grouped by their amount of experience with the three major variables are discussed in sequential order. A brief summary concludes the discussions on the Table 28 data.

TABLE 28.--Comparison of characteristic background data for respondents grouped according to: "no years teaching experience," "no teaching experience with exceptional children," "no academic credit pertaining to exceptionalities of children," and "no consultation experience about exceptionalities of children."

Teaching Position	Sex %	No. No.		Type of Teaching a Experience %	Amount Academic Creditb %			Consultations On Exceptionality of Childrenc %						
		Respon- dents	Yrs. Taught %		-10	N	P	F	N	S	Ex	N	R	G

8 Reg. C. T.,*														
1 Stu. T.,														
Ancil. Per.	70	10	50	--	--	--	30	40	30	10	20	10		
Misc. Data	10	--	--	--	--	--	--	--	--	--	60	--		

Stu. Tch.	100	5	--	--	100	0	0	67	33	50	33	17		

Reg. C. T.	80	20	50	20	45	25	--	--	--	35	50	0		
Misc. Data	5	--	--	--	10	--	--	--	--	--	15	--		

Reg. C. T.	82	11	45	9	36	46	55	27	19	--	--	--		
Misc. Data	9	--	--	--	9	--	--	--	--	--	--	--		

* Reg. C. T. = regular class teacher; Stu. T. = student teacher; Ancil. Per. = ancillary personnel.

^aN = none; P = part-time; F = full-time.

^bN = none, S = some; Ex = extensive.

^cN = none; R = receive, G = give.

Group reporting "no type of teaching contact" with exceptional children.--By using Table 28 one can see that the group reporting "no teaching experience . . ." contains eight regular class teachers, one student teacher and one ancillary personnel. Only 30 percent of this group reported "no academic credit" and just 10 percent reported "no consultations." However, it was impossible to make any conclusions concerning the consultation experience of this group since 60 percent of the data was missing.

Group reporting "no years taught".--The student teacher group was limited to five members to avoid a double count on the student teacher who classified herself as having "no experience" with exceptional children. The student teacher group, as one would expect, is characterized by their lack of teaching experience. As a group, student teachers reported a higher amount of academic credit and more consultation experience than was reported by the class room teachers who classified themselves as having minimal amount of experience.

Group reporting "no academic credit" in courses pertaining to exceptionalities of children.--By referring to Table 28 it can be seen that 35 percent of the 20 regular class teachers reporting "no academic credit" in courses pertaining to exceptional children also reported "no opportunity for consultations" pertaining to exceptionalities of children. The data indicates, nevertheless, that 25 percent of these 20 regular class teachers reported

"full-time" and 45 percent reported "part-time" teaching experience with exceptional children. It is also indicated in the descriptive data for the "no credit" group that 50 percent of these 20 regular class teachers reported having "received consultations" about exceptionalities of children.

Group reporting "no consultation experience" pertaining to exceptionalities of children.--The data presented in Table 28 indicate that 55 percent of the 11 regular class teachers reporting "no opportunity for consultation" about exceptionalities of children had more than 10 years teaching experience. By using "number of years taught" as an estimate for the average age status of the group, it was judged that this particular group included more of the older teachers than did the other "minimal experience" groups. The finding in Table 28 indicating that 55 percent of these 11 regular class teachers who do not receive consultations about exceptionalities of their pupils have also had no course work pertaining to exceptionalities of children, is of special importance to the present study. It is also important to note that although none of these 11 regular class teachers receive consultations and less than half of them took course work pertaining to the exceptionalities of children, 46 percent of them reported full-time and 36 percent part-time teaching experience with exceptional children.

Summary of characteristics of respondents reporting minimal amounts of: experience with exceptional children, academic credit pertaining to exceptionalities of children, and consultations about them.--A summary of the data contained in Table 28 indicates that 85 percent of the respondents who comprise the "minimal" amount of experience with the designated groups are regular class teachers. The fact that the student teacher classified herself in the "no experience . . ." group was less surprising than the "presence" of an ancillary respondent in that particular grouping. No doubt, an awareness of a lack of classroom teaching experience caused the ancillary respondent to choose the "no experience . . ." to be the group where he belonged. All ancillary personnel do, however, work with children who have exceptionalities. The foregoing discussions of the data presented in Table 28 focus attention upon the characteristics of the regular class teachers with minimal amount of course work and consultations pertaining to exceptionalities of children. Although most of the regular class teachers who classified themselves in the "minimal" groupings reported experience in teaching exceptional children they were found to have had little or no coursework pertaining to the exceptionalities of children. The findings also indicate that as a group these regular class teachers tend to "receive" rather than to give consultations concerning the exceptionalities of children. The group with the most years of teaching

experience reported the largest amount of teaching experience with exceptional children, yet over half of them claimed they had no course work pertaining to the exceptionalities of children and all of them indicated that they never had opportunity for consultations concerning exceptionalities of their pupils.

TABLE 29.--Distribution of respondents from four types of teaching positions among three environmental situations--schools with special education programs, schools without special education programs and special services.

Environmental Situation	Total N	Special Class %	Regular Class %	Student Teacher %	Ancillary Personnel %
School with spec. ed.	88	20	73	7	0
Schools with- out spec. ed.	56	0	100	0	0
Special services	10	0	0	0	100
Total	154	12	72	4	7

Distribution of Respondents from
Four Types of Teaching Positions
Between Schools Which Offer the
Most Opportunity and Schools
Which Offer the Least Opportun-
ity for Contact with Special
Education Personnel

A consideration of the data given in Table 29 shows that the schools with special education programs comprise 57 percent of the 154 teachers in the total sample. This

group of 88 teachers who were assumed to have more opportunity than teachers from schools without special education programs for contact with special education personnel were composed of 73 percent regular class, 20 percent special class, and 7 percent student teachers. The 56 teachers from the schools which had no special education programs were all regular class teachers and comprised 36 percent of the entire sample. For the purpose of obtaining a more precise measurement in the comparison of the teaching personnel in the two types of teaching environments the ancillary personnel, comprising 7 percent of the 154 respondents in the entire sample, were kept separate from the teacher groups. Eight of the ancillary personnel served both types of schools, while the other two ancillary were stationed in the school with the largest special education staff.

TABLE 30.--Correlation of Independent Variables with Dependent Variables.

N	Independent Variable	Dependent Variables ¹	
		RS	KS
132	Consultation Experience	.11	.34*
146	Amt. Academic Credit	.18*	.20*
152	Type of Experience	-.06	.12
127	Amt. Teach. Experience	-.10	-.06
142	Years of Teach. Experience	-.24	-.10

¹RS = Realism Score; KS = Knowledge Score.

* < .05.

Comparison of Correlations for
Four Major Variables in Re-
lation to Classroom Integration
Realism Scores and General
Information Inventory Knowl-
edge Scores

In order to be significant at the .05 level of confidence r 's of .134 or more are needed for an N of 150 respondents. In Table 30 it can be seen that consultation experience and amount of academic credit pertaining to exceptionalities of children have the highest correlation with the general information inventory knowledge scores. Type of teaching experience is very close to a significant correlation at the .05 level of confidence. Amount of teaching experience with exceptional children and years taught correlate negatively with the GII knowledge scores. As for the correlation of the independent variables with the classroom integration realism scores--amount of academic credit pertaining to exceptionalities of children is the only correlation with the CII realism scores in which the r of .18 is significantly different from zero at the .05 level. It may be seen in Table 30 that the consultation experience variable does approach the significant level. All of the other correlations with the CII scores are negative with the r of $-.24$ for years taught being significantly different from zero.

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This chapter summarizes the purposes and findings of the previous chapters as well as the conclusions of the investigation followed by recommendations and implications for curriculum development and implications for future research pertaining to classroom integration of exceptional children.

The present chapter is organized into three different parts. Part 1 is a summary of the purpose and objectives established in Chapter I, with a concise description of how the sample was selected and a brief review of the plan for implementation. A summary of the specific findings, consistent with the hypotheses stated at the end of Chapter III and reviewed in the present chapter, concludes the first part of Chapter V. Part 2 consists of conclusions based upon the findings for the total sample reported in Chapter IV. Part 3 is a discussion of the implementations with recommendations for education and for future research on problems raised by the present investigation.

Summary

The purpose of this study was to investigate teacher attitudes toward realistic educational placement of exceptional children (placement choices agreed upon by judges) in relation to teaching experience with exceptional children and in relation to amount of knowledge and understanding that teachers have concerning exceptional children.

The ten schools in the present sample were chosen with two distinct school environments in mind. Five schools were selected because they presented opportunity for regular classroom teachers to have contact with one or more special education programs, whereas the other five schools were chosen because they represented schools with no opportunity for contact with special education programs within their respective buildings. For the purpose of investigating the hypothesis that schools which provide opportunity for interaction with special education personnel will have teachers with significantly different attitudes toward exceptional children than teachers from schools which provide no opportunity for association with special education personnel within their building, the two following questions were added:

Question I: Do the teachers from the five schools which provide the most opportunity for contact with special education programs have a significantly greater amount of realistic attitude (higher CII scores) than teachers from the five schools which provide the least amount of

opportunity for contact with people in special education programs?

Question II: Do the teachers from the five schools which provide the most opportunity for contact with special education personnel have a significantly greater amount of knowledge pertaining to exceptional children (higher GII scores) than teachers from the five schools which provide no opportunity for association with special education program personnel within their respective buildings?

The subjects for this study consisted of 147 teachers, 6 student teachers, and 10 ancillary personnel from 10 cooperating schools in the Union School District of Jackson, Michigan. There was a 97.6 percent response from the five schools which had special education programs and a 88.8 percent response from the five schools which had not established special education programs. The geographical distribution of the ten participating schools by socioeconomic status appeared to be uniform and it was felt that the entire staff of the school district's 20 elementary schools was satisfactorily represented by the 154 respondents. The student teacher group and the ancillary group were kept separate from the teacher group in order to avoid a possible bias on the "type of teaching experience" variable. The student teachers came from regular classrooms of three schools which provided special education programs within their respective buildings. The ancillary personnel

were six speech correctionists, an occupational therapist, a physical therapist, a school diagnostician and a special education coordinator. The 147 teachers in the ten elementary schools of Jackson represented 56 percent of the total elementary school faculty. Since 9 out of the 147 teachers failed to respond there were 138 usable teacher responses in the final sample which represented a 93.9 percent classroom teacher response.

The three measuring instruments employed in this study were: (a) The Classroom Integration Inventory (CII); (b) The General Information Inventory (GII); and (c) The Personal Data Questionnaire. ✓ The first two measuring instruments were developed by Haring et al. (1958) to obtain pre-workshop and post-workshop data "to reveal the degree of acceptance characterizing the teacher's relationship to exceptional children" (p. 63) and "to determine the gains in information that were made by the teachers as a result of the experiences they had from the workshop" (p. 60).

The scoring keys for both the CII and GII were re-established by submitting the items from these two inventories to specialists in the respective areas of special education until agreement was reached or the items were omitted. The realism scores represent the position of the respondents in relation to the positions taken by judges on the various placement problems presented in the classroom integration inventory. The knowledge scores also represent the amount of agreement found between the

answers of the teachers and the answers selected by experts on the items comprising the general information inventory.

Amount of realistic attitude was measured on the CII, a 295 point scale based on the teacher's selection of an educational placement for various degrees of exceptionality ranging from regular classroom assignment without special assistance to complete exclusion from public school. Amount of accurate information pertaining to exceptional children was measured on the GII scale ranging from 0 to 91. Since it was necessary to re-establish the scoring keys for these two tests the total scores deviate from those in the original tests used by Haring et al. (1958, pp. 39, 56). The "answers" to the items are indicated in the appendix.

In addition to the two measuring instruments described above, a personal data evaluation questionnaire was administered for the purpose of collecting specific data concerning type and amount of experience with exceptional children, educational background pertaining to exceptional children, and consultation experience pertaining to one or more of the exceptionalities listed in this study.

The resulting data were analyzed by using a one-way analysis of variance test supplemented by a multiple range test modified for unequal replications. The UNEQI routine (Ruble, Kiel, Rafter, 1966) was used to calculate the

one-way analysis of variance statistics since this computer program is designed to handle unequal frequencies within the variance categories. Duncan's New Multiple Range Test (Edward, 1960, pp. 136ff), as extended for unequal replications by Kramer (1960), was used to investigate the extent to which a particular subgroup mean contributed to the total variance represented by the F test. This procedure made it possible to order the group means from high-to-low and then to examine the "difference" between successive pairs-of-means to ascertain which of these "differences" did, in fact, statistically depart from chance at a stated level of significance. The level of confidence chosen for the present study was .05.

The Pearson Product Moment Correlation was employed to study the relationship between the degree of realistic acceptance (CII scores) and the amount of information (GII scores) held by the respondents.

Attitude

Relationship of Attitude to Type of Teaching Experience

1-a.--Teachers who reported full-time responsibility for the educational program of one or more exceptional children were not found to be significantly more realistic in their attitudes (higher CII scores) toward the educational placement of these children than teachers who reported having part-time responsibilities.

Attitudes in Relation to Amount
of Teaching Experience

2-a.--Teachers who reported one or more years of full-time responsibility for the teaching program of one or more exceptional children were not found to have significantly more realistic attitudes (higher CII scores) toward the educational placement of these children than teachers who reported one or more years of part-time responsibility.

3-a.--Teachers who reported one or more years of part-time teaching with one or more exceptional children were not found to have significantly more realistic attitudes (higher CII scores) than teachers who reported no teaching experience with exceptional children. In fact, the findings were reversed--the "no experience" group was significantly more realistic than either of the other two experience groups.

Attitudes in Relation to
Amount of Academic Credit

4-a.--Teachers who reported one or more years of academic credit in education or psychology courses covering some or all of the areas of exceptionalities listed in the present study were found to have a significantly more realistic attitude toward placement (higher CII scores) than teachers who reported less than one year of academic credit. The group with one or more years of credit, however, was not found to be significantly more

realistic in their attitudes toward educational placement than the group with no academic credit pertaining to exceptional children.

Attitudes in Relation to Consultation Experience

5-a.--Teachers who reported experience in giving consultations pertaining to one or more of the exceptionalities listed in this study were not found to have a significantly more realistic attitude toward classroom placement of (higher CII scores) exceptional children than teachers who reported having received periodic consultations pertaining to exceptionalities of children. Furthermore, teachers reporting experience in receiving periodic consultations about children with exceptionalities and teachers reporting experience in giving consultations were not found to have a significantly more realistic attitude (higher CII scores) than teachers reporting no experience in consultations about exceptionality.

Knowledge

Amount of Knowledge in Relation to Type of Teaching Experience

1-b.--Special class teachers assigned to programs in which they had full teaching responsibility for exceptional children were found to have a significantly greater amount of accurate information pertaining to exceptionalities of children (higher GII scores) than

regular class teachers reporting either full- or part-time responsibility for the teaching program of one or more exceptional children. In fact, the small group (10 respondents) reporting "no teaching experience" with exceptional children were found to be significantly better informed pertaining to exceptional children than regular class teachers reporting "part-time experience" with exceptional children. Although it was not predicted by hypothesis 1-b, the ancillary personnel group was found to have a significantly greater amount of information pertaining to exceptional children than any of the other four types of teaching experience groupings.

Amount of Knowledge in
Relation to Amount of
Teaching Experience

2-b.--Teachers reporting one or more years of full-time responsibility for the teaching program of one or more exceptional children were not found to be significantly more knowledgeable (higher GII scores) concerning exceptionalities of children than regular class teachers reporting one or more years of shared responsibility for the educational program of one or more exceptional children.

3-b.--Teachers who reported one or more years of sharing the educational program of one or more exceptional children were not found to have a significantly greater amount of information pertaining to exceptional children (higher GII scores) than teachers who reported no teaching experience with exceptional children.

Amount of Knowledge in
Relation to Amount of
Academic Credit

4-b.--Teachers who reported one or more years of academic credit in education or psychology courses covering some or all of the areas of exceptionalities listed in the present study were found to have a significantly greater amount of accurate information (higher GII scores) than teachers who reported less than one year of academic credit. The teacher group with the more extensive amount of credit, however, was not found to have a significantly greater amount of knowledge than the respondent group which reported "no credit" in courses pertaining to exceptional children.

Amount of Knowledge in
Relation to Consultation
Experience

5-b.--Teachers who reported having given consultations pertaining to one or more of the areas of exceptionalities listed in the present study were found to have a significantly greater amount of accurate information pertaining to exceptional children (higher GII scores) than teachers who reported having received periodic consultations from a specialist in one or more of the exceptionality areas. The teacher group which have consultations was also found to have a significantly greater amount of knowledge than the respondent group which reported "no opportunity" for such consultations.

Correlation of Attitudes and Amount of Knowledge

6.--The results of the Pearson Product Moment Correlation showed a correlation of .28 which is significantly different from zero at the .05 level of confidence.

Discussion and Conclusions

On the basis of the findings resulting from testing the eleven hypotheses and the two additional questions, the following conclusions are presented. Generalizations beyond the population under study must be made with caution.

Attitudes Toward Classroom Integration of Exceptional Children

Teachers who reported a close and continuous type of teaching contact with exceptional children were not found to be significantly more realistic in their judgments concerning classroom integration of exceptional children than were teachers and ancillary personnel who reported intermittent and a less direct type of teaching experience contact with these children. The mean rankings, although the differences were not significant, show a trend toward more realistic attitudes on the part of teachers who reported "no experience" with exceptional children than was shown by teachers who claimed a full-time teaching experience or teachers who reported having shared the responsibility for teaching one or more exceptional children. The finding that "amount of experience"

with exceptional children did not increase the teacher's ability to make more realistic decisions concerning educational placement for them is in agreement with the findings reported by Haring et al.: "Whether or not teachers had experiences with exceptional children in their classrooms seemed to make little difference in their ability to be more accurate in their judgment concerning the placement of these children" (1958, p. 125). As for type of experience with exceptional children, there was really no difference in the CII mean score rankings of the ancillary personnel and the group of teachers who reported "no teaching experience" with exceptional children. The ancillary group and the group with "no experience" were comparable in size (10 respondents in each group) but their professional backgrounds were different. The ancillary group was somewhat younger and had taught fewer years than the other group. The respondents in the ancillary group reported far more academic credit pertaining to exceptionalities than did the "no experience" group. Only 10 percent of the latter group reported having given consultations and 30 percent having received consultations whereas 80 percent of the ancillary group reported having given consultations pertaining to exceptionalities. The ancillary group is of special significance in this study because the professional backgrounds of the respondents in this group are somewhat similar to the professional backgrounds of the special education group.

Special education teachers and ancillary personnel were characterized by their extensive course work backgrounds pertaining to exceptionalities of children and were significantly more realistic in their attitudes toward classroom integration of exceptional children than were teachers who were characterized as having some course work pertaining to the exceptionalities listed in this study. Although there was not a significant difference at the .05 level of confidence, an unexpected finding was that the CII mean score ranking of the "no credit" group was higher than the CII mean score for the "some credit" group. Had this been a significant difference one might assume some degree of truth is contained in the old adage, "a little learning is a dangerous thing"! This "no credit" group was comprised of 20 regular class teachers, half of whom reported having received periodic consultations pertaining to exceptionalities of children. It appears that teachers who recognize their lack of academic credit pertaining to exceptionalities of children seek ways to bridge the knowledge gap in their professional background through the use of consultations.

Teachers who reported experience in giving consultations were not found to be significantly more realistic (higher CII scores) in their attitudes toward classroom integration of exceptional children than teachers who reported "receiving" or "no opportunity for receiving" consultations pertaining to exceptionalities of children

--the "blind leading the blind"! It was of special interest, however, to note that the mean score rankings were in the expected order, that is, the group which gave consultations had the highest CII mean score ranking, with the group which received consultations next, while the group which reported "no opportunity for receiving consultations" had the lowest CII mean score ranking. Although it must be kept in mind that the difference in these CII mean score rankings for the teachers with different amounts of consultation experience were not significant ones, there were some interesting findings concerning the professional backgrounds of the teachers divided according to consultation experiences. Closely associated with their ability to give consultations concerning exceptional children is the amount of course credit pertaining to exceptionalities of children reported by the respondents.

It was found that out of 94 percent of the special class teachers who reported extensive academic credit, 89 percent of them gave consultations concerning the exceptionalities of children. From the ancillary group, 80 percent reported an extensive academic credit background pertaining to exceptionalities and 80 percent of the ancillary personnel reported that they gave consultations. Over 50 percent of the group of teachers who reported "no consultations" pertaining to exceptionalities of children were among the group of respondents who reported "no

academic credit" on exceptionalities. Less than 10 percent of the group which had "received periodic consultations" were among the respondents who reported "no academic credit" pertaining to exceptionalities of children.

Knowledge About and Amount
of Experience with Exceptional
Children

Special Education teachers reporting full-time teaching responsibility for exceptional children were found to have a significantly greater amount of accurate information concerning children with exceptionalities (higher GII scores) than regular class teachers reporting either full- or part-time teaching responsibility for the educational program of one or more exceptional children. Special class teachers, however, were not significantly better informed (higher GII scores) than the small group (10 respondents) reporting "no teaching experience with exceptional children." And furthermore, since the group reporting "no experience . . ." was found to be significantly better informed than the regular class teachers reporting shared educational programs for exceptional children, the 10 respondents without teaching contacts with exceptional children were considered to be as well informed as the full-time special education teachers. The finding that special class teachers were significantly better informed than regular class teachers reporting

full-time contact with exceptional children lends additional support to the hypothesis that teachers who have had full-time teaching contacts will score significantly higher on the GII Scale than teachers who have had part-time teaching contacts with exceptional children. It is generally observed that special class teachers have a greater number of exceptional children with whom they have a close, continuous and extensive amount of teaching experience than do regular class teachers. Pre-service and in-service education for special class teachers include courses pertaining to exceptionalities of children. It has been observed by Haring et al. (1958) that teachers having daily teaching contacts with exceptional children are more receptive to in-service workshops which provide information and guidance on the problems of exceptional children than teachers who are not faced with an immediate need for such information (p. 130). The ancillary personnel represented by eight therapists and two administrators from special services were found to have a significantly greater amount of accurate information pertaining to children with exceptionalities than any other type of teaching experience group. The ancillary group was characterized by the clinical background experience of its members, 80 percent having had extensive academic credit pertaining to exceptionalities of children and 80 percent having had experience in giving consultations pertaining to the problems of exceptional

children. The ancillary group had a larger percentage of male members than any other type of experience group, and its respondents tended to be a little younger than the respondents in the other groups.

Although lacking significance, the mean score rankings for amount of teaching experience with exceptional children show a trend which implies that teachers who have had little or no teaching experience with exceptional children will probably have a greater amount of accurate information about exceptional children than regular class teachers who have had a more continuous and extensive teaching experience with exceptional children. Had these differences in the reversed mean score rankings been significant, one could hypothesize that the recency of education variable took precedence over the amount of teaching experience variable. Only 30 percent of the "no teaching experience" group reported "no academic credit" pertaining to exceptionalities of children. Either by pre-service or in-service education, 40 percent of the "no teaching experience" group had taken "some" courses and 30 percent extensive academic work pertaining to exceptional children. It was noted that 60 percent of the "no teaching experience" group did not answer the questionnaire item concerning the type of consultation experience.

To summarize, it seems reasonable to conclude that amount of experience as such does not operate as a determinant of a teacher's ability to possess a significantly

greater amount of information about exceptional children than a teacher with little or no experience with these children.

As was predicted in the hypothesis, the group of teachers reporting "extensive academic credit" pertaining to exceptionalities of children proved to have a significantly greater amount of knowledge about these children than teachers reporting only "some academic credit" pertaining to exceptional children. The teachers with extensive academic credit, however, were not found to be significantly more knowledgeable concerning children with exceptionalities than the small group of 20 regular class teachers who reported "no academic credit" in courses pertaining to these children. Several observations concerning the professional background of the "no academic credit" group were noted. In spite of the fact that these 20 regular class teachers had taken no course work pertaining to exceptionalities of children, 70 percent of them reported having teaching experience with children who had exceptionalities. Perhaps they were aware of their need for information and guidance concerning their problems with exceptional children because 50 percent of them reported having received consultations from some specialist in an exceptionality area.

The above finding that amount of course credit is significantly related to the amount of accurate information

pertaining to exceptionalities of children is, no doubt, obvious to most readers of this research. Discussion concerning the importance of relevant course work to knowledge of exceptional children seems unnecessary.

Data gathered in this study indicates that teachers who have given consultations pertaining to one or more of the exceptionalities listed in the questionnaire, have significantly greater knowledge of exceptional children than teachers who have received only periodic consultations or have had no opportunity for such consultations.

As would be expected, the groups in which 80 or 90 percent of the members "give consultations" were the special education teachers and the ancillary personnel. There were only 3 percent of the regular class teachers who reported having given consultations pertaining to exceptionalities. The ability to give consultations appears to be closely related to the amount of academic course work pertaining to exceptional children since 94 percent of the special class teachers, 80 percent of the ancillary, and 25 percent of the regular class teachers report having earned "extensive credit" pertaining to exceptional children. And the fact that communication is educative to the giver of the communication is a very common observation of teachers of communication. One of education's outstanding philosophers (Dewey, 1916) theorizes that "to formulate a communication tends to intensify one's knowledge and modify his attitude toward the content of the communication" (p. 6).

The teachers or ancillary personnel who make a practice of giving consultations pertaining to problems of exceptional children will tend to have a significantly greater amount of information concerning certain exceptionalities than the counselees. On the other hand, the teachers who receive the counseling services may be influenced to adopt attitudes toward exceptional children which are not significantly different from that of the attitude of the consultants toward exceptionality, while at the same time there still remains a significant difference in the amount of knowledge about exceptional children possessed by the consultant and the consultee. The evidence appears to indicate that serving as a consultant is significantly related to the amount of accurate information one possesses.

Correlation of Attitude Toward
Classroom Integration of Ex-
ceptional Children with Knowl-
edge and Understanding of
Exceptional Children

Teachers who earned a significantly higher rating (higher CII scores) than other teachers on their ability to make accurate judgments (placement choices approaching that of judges) concerning the educational placement of exceptional children, also earned a significantly higher rating (higher GII scores) than other teachers on their amount of accurate information pertaining to exceptionality. This positive correlation between

attitude toward classroom integration and knowledge about exceptional children lends additional support to the findings in hypothesis 4a in which teachers with extensive academic credit in courses pertaining to exceptionalities were found to have a significantly greater amount of realistic judgment (higher CII scores) toward the educational placement of exceptional children than teachers who reported lesser amount of academic credit.

Comparison of Teacher Attitudes
Toward Classroom Integration of
Exceptional Children in Two
Types of Schools

The ten schools in the sample were of two distinct types--five of the schools had special education programs while the other five schools did not have special education programs. It was hypothesized that the teachers from the schools which provided the most opportunity for contact with children and teachers in special education would have a significantly greater amount of realistic judgment about educational placement of exceptional children than teachers from the five schools which provided the least amount of opportunity for interpersonal relationships with people in special education.

Although there was a greater amount of opportunity in the five schools with special education classes for regular class teachers to have interpersonal relations with special education teachers and exceptional children, it was found that teachers from these schools were not

able to exercise a significantly greater amount of better judgment towards the educational placement of exceptional children than teachers from the five schools which provided the least amount of opportunity for association with special education teachers and children in special education programs. The fact that there was no significant difference between the attitudes of teachers towards educational placement of exceptional children in these two sets of schools may be an indication of good inter-staff communication between the schools which provide special education programs and the five schools which did not provide such programs. The opportunities for mutual exchange of information among teachers in the school district is described in the next section.

Relationship Between Amount of
Knowledge and Amount of Contact
with Exceptional Children in Two
Types of Schools

Although the five schools chosen because they provided special education programs and thus theoretically did offer the most opportunity for regular class teachers to have interpersonal relations with special education teachers and exceptional children it was found that the teaching staff from these five schools were not significantly better informed concerning the disabilities of exceptional children than the teachers from the five schools which did not provide special education programs in their respective school buildings.

There are several possible reasons why the results of this study show no significant difference in the "amount of knowledge" between teachers employed in schools with special education programs and teachers employed in schools which have no special education programs. In Jackson, schools without special education programs do have special itinerant services such as remedial reading, speech correction, and in some of these schools a teacher consultant program. These itinerant services to the schools offer opportunity for the regular classroom teachers to have interaction with teachers who have had either pre-service or in-service education pertaining to certain educational problems of exceptional children.

In the past ten years in Jackson there has been a definite increase in demand from teachers for both pre-service and in-service education. The teachers from both types of schools (with and without special education programs) have opportunity for interpersonal relations in curriculum committee meetings as well as in in-service training classes. The director of instruction in the Union School District, having studied the logic of grouping for instruction at the junior high school level (Sommers, 1960), continued to encourage the practice of grouping at the elementary school level to meet childrens' learning needs. Thus the teachers from both types of schools have been made aware of the importance of instruction which recognizes individual needs of children.

There was also opportunity for teachers from the special education schools to have professional interaction at joint meetings of their professional associations such as the Association for Childhood Education and the Council for Exceptional Children. The administration of the Union School District encourages its teachers to participate in research. The Jackson Public School system has representation by teachers and administrative personnel in a current cooperative project for educational development which is attempting to develop leadership for the improvement of education. The city of Jackson is located about half-way between two of Michigan's largest universities--the University of Michigan and Michigan State University. Many teachers commute to these universities for graduate studies and educational leaders from these two universities are sometimes invited as resource people or guest speakers for educational functions.

Implications

Although there may be some amount of overlap, this part of the chapter is subdivided into two sections: implications for education and implications for research.

Implications for Education

This research, by investigating the relationship between knowledge of disabilities, kind and amount of experience with exceptional children, and teacher attitudes

toward their classroom placement emphasizes a vital consideration for successful educational placement--the attitudes of classroom teachers toward children with disabilities. This study has attempted to fill a gap in educational research by studying attitudes of educators with different types and amounts of teaching experience and varying professional backgrounds, towards classroom integration of exceptional children.

The results of the analysis of data used in this study reveal that teachers who have had more extensive X course work pertaining to exceptionalities of children take an attitudinal position which is in closer agreement with the attitudes of the cooperating judges (five judges who re-established the Classroom Integration Inventory realism scores in this research), than the teachers who have had a less extensive amount of academic work pertaining to exceptionalities of children. As for type and amount of experience with exceptional children, the data suggests that the small group of respondents who reported no experience with exceptional children were in closer agreement with the placement choices of the judges than teachers who reported either intermittent or continuous teaching contacts with exceptional children. To summarize, X it is the type (ancillary vs. special education vs. regular class teachers vs. student teachers) of teaching X experience, with exceptionalal children and amount of

academic credit that emerge from this study as determinants of teacher attitudes toward classroom integration of exceptional children.

Furthermore, the findings of this research show that teachers who have more extensive course work pertaining to exceptionalities of children and teachers who give consultations concerning one or more of the exceptionalities are significantly better informed concerning generally recognized information about exceptionalities of children than teachers who have a minimal amount of academic credit pertaining to exceptionalities and teachers who report either having received consultations or no consultations about exceptionalities of children. The small group of respondents, reporting no teaching experience with exceptional children, who were able to take attitudinal positions which more nearly approached the attitudinal positions of the judges toward educational placement than teachers reporting full-time experience were found to be significantly more knowledgeable than regular class teachers who reported having part-time teaching experience with exceptional children. The special education teachers and ancillary personnel were found to possess a significantly greater amount of information pertaining to exceptionalities of children than classroom teachers, although their attitudes toward the educational placement of exceptional children were not found to be significantly different from that of the regular class teacher.

To summarize the relations between amount of teaching experience with exceptional children, consultation experience about exceptionalities of children, amount of educational credit pertaining to exceptionalities and teacher attitudes toward classroom integration of exceptional children the following implications for education are presented:

Integration of exceptional children.--The findings from this investigation strongly suggest that integration of exceptional children into regular classroom teaching situations can be more effectively achieved when the following recommendations are observed:

1. Teachers should have concurrent and/or prior teaching experiences with exceptional children in addition to pre-service or in-service education dealing with exceptionalities of children.
2. Teacher education programs should include extensive course work pertaining to exceptionalities supplemented by actual teaching experiences with children who have the exceptionalities being studied.
3. Teachers should be given ample opportunity for supportive consultations with experts in the particular exceptionality area in order that they may discuss specific problems of exceptional children as they arise in the classroom situation.

4. Exceptional children should be placed with teachers who are known to possess at least a general knowledge and understanding of exceptional children together with a realistic attitude toward their educational placement.
5. Children who "cannot" be educated in regular grades should be taught in special education programs, thus allowing the classroom teacher (whether regular or special classroom) to have more time to teach children who are able to benefit from the classroom program.

Pre-service education.--The implications of these findings to pre-service education suggest that academic courses pertaining to exceptional children are effective in increasing the amount of accurate information teachers have about exceptional children. The amount of teaching experience is less important than the type of teaching experience in the development of realistic attitudes toward an educational program for the exceptional child. Student teachers who anticipate having one or more exceptional children in their class must have educational backgrounds which include academic course work pertaining to the exceptionalities of children. This course work will be more effective for teacher education if it is supplemented with some actual teaching experience with exceptional children. Before taking a vocational

assignment in a situation involving exceptional children every teacher ought to take an inventory of her own knowledge and understanding of exceptionalities of children and assess her own attitudes toward the educational placement of these children. Cognizant of her own strengths and weaknesses, the potential teacher of handicapped children can seek experiences to strengthen her preparation. Consultations with experts, special education teachers, and ancillary personnel can be of value in helping the student teacher to fill in the educational gaps pertaining to exceptionalities of children.

In-service education.--The implications of this research for in-service education is very similar to that presented in the previous section on pre-service education. The implications for teachers who anticipate teaching children with exceptionalities either in regular classrooms or in special classes has already been discussed. The success of educational placement for an exceptional child is assumed to be related in some manner to the educational background and attitude of the teacher with whom the child is placed. A research study by Haring et al. (1958) demonstrated the value of orientation programs for in-service teachers who want to learn how to make a more positive approach to the teaching of all types of exceptional children.

These investigators provided a workshop program for teachers which offered opportunities for resolving problems

about exceptional children as they came up in the teacher's daily classroom experience. The workshop experience was found to be "a supportive experience for teachers who are engaged in teaching exceptional children within their classrooms" (Haring et al., p. 133). The present study provides data with which to strengthen the concept that orientation programs designed to develop knowledge and understanding about exceptional children and more positive teaching approaches to them, is an effective approach to the improvement of classroom integration for exceptional children.

Implications for Research

The unexpected reversal of the mean score rankings for both the classroom integration inventory and the general information inventory as related to amount of teaching experience suggests that amount of teaching experience with exceptional children tends to widen the gap between knowledge and attitude. Teachers who have had a more recent education may tend to express an attitude which is in closer agreement with the thinking of current experts in the field of education than teachers who have not had recent pre-service or in-service education. This research also suggests that academic course work which deals with exceptionalities is the most significant variable affecting attitudes toward classroom placement. From the results obtained in the present research

it is evident that academic course work pertaining to exceptionalities of children is the only variable tested that enables teachers to make a realistic appraisal of classroom integration for exceptional children.

On the other hand, it was found that three of the four variables tested in relation to teachers' knowledge of exceptional children made a significant difference at the .05 level of confidence: (a) close and continuous type of experience, (b) giving of consultations pertaining to one or more of the exceptionalities, and (c) an extensive amount of course work dealing with exceptional children, were found to be important in influencing teachers' knowledgeability as measured on the general information inventory.

The findings of the present study are based on data designed to measure type and amount of teaching experience with exceptional children, type and amount of consultation experience concerning exceptional children, and amount of academic course work pertaining to exceptionalities of children covered by the following subareas: (a) behavior disorders, (b) emotional disorders, (c) impaired hearing, (d) impaired speech, (e) impaired vision, (f) orthopedic and cardiac, (g) physical attractiveness, (h) seizures, (i) mental retardation, and (j) intellectual superiority. Inspection of the CII test and the GII test revealed a lack of uniformity in number of items used for the

respective subareas of the general information inventory. The number of items in the GII test ranged from four items in the seizures area to 18 items for the mentally retarded subarea. The classroom integration subareas were originally equal in number of items per area. Each subarea for the CII test contained six items¹ until the six items in the learning area were separated into three items dealing with the intellectually superior and three items dealing with mentally retarded. Item number 17, which deals with emotional disturbance, was omitted from the classroom integration inventory test used in the present study since it lacked inter-judge reliability. The GII behavior subscores (11 items) and vision subscores (9 items) showed the highest correlation (.75 and .72) with the GII total score, whereas the CII seizures subscores (6 items) and the orthopedic subscores (6 items) and the special handling subscores (6 items) represented the subscore areas of the CII test which had the highest correlations (.65 for seizures and .62 for orthopedic and special handling) with the total CII test score.

Although there are six items in each area of the CII test divisions listed above, there are too few items in each subarea to predict that teachers who are able to make the best judgments concerning classroom integration

¹In the present study the CII subarea on emotional disorders has only five items.

for children with seizures, orthopedic and special handling problems would also be able to approach the judgments of special education experts concerning the present day thinking on educational placement for children with the other exceptionalities listed in the present research. The above limitations of test structure have obvious implications. A carefully structured general information inventory in which the subareas have been validated and tested for inter-judge reliability on well-constructed items should yield subscore data which lends itself more readily for subscore correlations between amount of information in a given area and attitude toward classroom integration of children in that particular subarea of investigation. It is also recommended that the classroom integration inventory be revised for both structure and content; the number of items for each degree of severity (slight, moderate, severe) to be increased in order to strengthen the reliability of the CII subscores and the item content restructured to strengthen the validity of future correlations between attitude toward educational placement in a particular area and amount of knowledge possessed by the respondent in that area of exceptionality.

Although the CII and GII scales were not equated for comparability of the respective subareas of exceptionality, it was somewhat gratifying to find that the highest correlation (.25) occurred between the speech

subareas of the two measuring instruments. It was also of interest to find that the next highest correlation (.24) was between the CII behavior disorders subscores and the GII impaired hearing subscores.

The fact that the speech sub-tests obtained the highest correlation might be interpreted to mean that most teachers are better informed and know more about the educational placement of children who have impaired speech. It is possible that many of the respondents had never been in an orthopedic classroom, but there are few teachers who are not acquainted with some speech correctionist who comes to their school. Hearing problems often "cause" behavior problems so it was not surprising to find that these two subscore areas correlated. It is readily understandable that one needs to be informed concerning problems of emotional disturbance in order to know what kind of educational placement is best for emotionally disturbed children. But before it can be determined with any certainty to what extent the teacher's knowledge of an exceptionality is predictive of his attitude toward educational arrangements for a child with that exceptionality, more research is needed.

Administrative attitudes toward educational placement have a way of seeping down to where they affect pupils in the classroom. The findings of this study should be of value to coordination of cooperative program planning

for exceptional children, and serve as a basis for further research on classroom integration. Cooperative program planning for exceptional children within a school system involves much more than knowledge concerning exceptional children. Wise educational placement for these children must also take into consideration the characteristics and orientation of those teachers who are most accepting and sympathetic toward educational arrangements which best fit the requirements of children who happen to be exceptional in relation to their educational needs. Data derived from this study is pertinent both to a coherent approach to the discussion of teacher attitudes toward classroom integration of exceptional children and to curriculum development for exceptional children. Educators should make use of all available research which helps teachers to know and understand the uniqueness of an exceptional child in order to adjust the curriculum to this uniqueness. As the demand for teachers of exceptional children increases there will also be an increasing demand for pre-service and in-service education. Therefore, the united efforts of teacher education personnel and research investigators committed to the ethical and moral values of our society are needed to initiate a plan of educational placement which is designed to improve the educational opportunity of exceptional children in our public school system.

Educational institutions need to put more emphasis upon social development and responsibility as well as upon academic excellence. The citizens of tomorrow are the pupils of today. The growth and development of school children is interdependent with the growth of teachers and administrative personnel. Through shared experiences with minority groups such as exceptional children, educational communications pertaining to their problems becomes more effective (Haring et al., 1958, p. 130). "Lack of motivation," rather than serving as an explanation for unsatisfactory academic progress, should serve as a challenge for educators to develop techniques, attitudes, and educational programs which meet the needs of individual pupils.

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APPENDICES

APPENDIX A

JACKSON UNION SCHOOL DISTRICT
STATEMENT OF EDUCATIONAL PHILOSOPHY

REPORT OF
SPECIAL EDUCATION STEERING COMMITTEE

JACKSON UNION SCHOOL DISTRICT
SPECIAL EDUCATION SERVICES

STATEMENT OF EDUCATIONAL PHILOSOPHY
UNION SCHOOL DISTRICT
JACKSON
1964-1965

We, the Board of Education as elected representatives of the people, believe that education is a necessary and continuing part of life and that in a democracy, all children are entitled to appropriate educational opportunities according to their individual needs and abilities.

We believe that our school should strive to interpret to each individual the ideals of a free society and its accompanying privileges and responsibilities.

Because we believe the foregoing values are held by the citizens of the Union School District, we through our professional staff should:

1. Recognize that all children are citizens of individual worth and dignity.
2. Provide a comprehensive, continuous program that will assure a basic educational foundation for each individual, as well as enriched programs to meet the needs of all students.
3. Help the individual develop a high regard for scholarship by stimulating logical, critical and creative thinking.
4. Make every effort to inspire within the pupil personal integrity and moral strength.
5. Assist every child in developing an understanding of and a respect for the rights, privileges and abilities of others.
6. Provide for the optimum development of both physical and mental health of all children.
7. Encourage a closer co-operation with parents to better serve the needs of the child.
8. Assist students to acquire those skills and values in quality, depth and flexibility essential to successful living in a rapidly changing society.

To: Miss Mildred Sommers, Director of Instruction

From: Special Education Steering Committee: Mildred Baker, David Barrett, William Diekman, Royal Dressel, Carroll Fortress, George Gentry, Ethel Green, Earl Holman, Harold Matthews, Carrie Sissala, William Warnock

Subject: Report and recommendations regarding special education in the Union School District.

The Special Education Steering Committee was appointed by the Director of Instruction in September, 1959, to study the present organization and status of special education in the Union School District, and report its findings, together with recommendations, to her. The Committee has reached the following conclusions:

1. General philosophy of special education:
 - a. Handicapped children are basically children with normal needs, interests, desires, fears. The handicap is important to the extent that it hinders normal growth, development, and learning. In all educational planning for the handicapped child, it is the child and not the handicap which is the center of attention.
 - b. The aim of special education is to help the child learn to function as effectively as possible in the world of normal individuals, at all ages.
 - c. Each child shall be given as normal an educational experience as possible, in the light of his handicap. He should be given only such special help as his handicap demands. A proper special education program is based primarily on the similarities between the handicapped child and his peers--not on the differences.
 - d. An effective special education program will have direction and continuity from the pre-school level through junior college. The program must be kept under continuing review and evaluation, and changed when and where necessary.
2. Special education is a part of the instructional program, and should be placed in the department of instruction.

3. Special education should consist of a planned, coordinated program of instructional services for the:
 - a. educable mentally retarded
 - b. orthopedically handicapped
 - c. aurally handicapped
 - d. visually handicapped
 - e. hospitalized and homebound
 - f. speech handicapped
 - g. emotionally disturbed
 - h. lowered vitality (see Staff Manual for definition)

4. At present, there is no coordinated program of special education in Jackson. Special education involves planning and coordination of the total educational program from pre-school through junior college. In cooperation with building administrators and teachers, a continuous program of instruction, adapted to the special needs and limitations of the pupils, needs to be planned and kept under continuous review. At present there are 35 professional and non-professional persons directly involved in special education. Special education is operating in 5 different schools, and soon will operate in the high school. These numbers will increase as the program grows to meet the needs in the community. Without competent coordination, the program cannot operate and develop effectively.

UNION SCHOOL DISTRICT--SPECIAL EDUCATION SERVICES

1966-67 School Year

Pre-School & Kdg.	1	2	3	4	5	6	7	8	9	10	11	12
	"Type A" Mentally Handicapped--17 Classrooms in 6 Elementary and all Secondary Buildings--Optimum Capacity 260											
Mentally Handicapped	"Type C" Consultant for the Mentally Hdcpd--Reg Rms-Opt. 12											
	"Type C" Job Placement Coord.											
Physically Handicapped	Program for the Blind & Partially Sighted 3 Rms; Wilson & Allen-Max. Capacity 24											
	Teacher-Counselor for the Vis. Handicapped; 1 Teacher-Optimum 12											
Emotionally Disturbed and Perceptually Handicapped	Program for Deaf & Hard-of-Hearing 4 Classrooms; Allen-Maximum Capacity 28											
	Teacher-Counselor for the Deaf & Hard-of-Hearing; 1 Teacher-Optm. 12											
	Program for Crippled & Otherwise Physically Hdcpd.; 3 Rooms; Allen-Optm. Cap. 36											
	Teacher-Counselor-Physically Handicapped; 1 Teacher-Optm. 12											
	Physical & Occupational Therapy Available to Physically Hdcpd.; Allen - 2 Therapists											
	Teacher-Counselor-Phys. Handicapped Reg. Rooms; 1 Teacher-Opt. Load 12											
	Home and Hospital Instruction to Students Confined for Reasons of Physical Health - 2 Teachers - Maximum Capacity - 24											
	Speech Correction-Speech Handicapped Per Teacher Max. 100-Max. Load-400											

APPENDIX B

MEMORANDUMS TO PARTICIPATING SCHOOLS

MEMORANDUM

May 21, 1965

TO:

FROM: Dr. Mildred Sommers, Director of Instruction

RE: RESEARCH PROJECT

Miss Doris Proctor, Senior Speech Correctioist on our staff, is conducting research for her doctoral thesis. She will be studying the relationship between knowledge of, and experience with, exceptional children among teachers.

Miss Proctor has discussed this study with Dr. Gentry, Mr. Barrett and me, and we believe that it will be of value to the district in our planning for handicapped children.

The study will involve all the teachers in your buildings and will require two meetings with them, no longer than one hour each. Miss Proctor will be contacting you to discuss this project. I hope you will cooperate with her.

June 15, 1965

MEMORANDUM

To: Teachers of the Participating Schools
From: Doris I. Proctor, Speech Correctionist
Re: RESEARCH PROJECT

Thank you very much for participating in the collection of data for my study concerning the relationship between knowledge of disabilities, kind and amount of experience and class room integration of exceptional children.

APPENDIX C

PERSONAL QUESTIONNAIRE

Years Taught

- Encircle one or more of these letters which correspond to the exceptionalities listed in the above box to indicate the exceptionalities with which you have had experience.

- | | |
|--------------------------|--------------------------------------|
| A. Behavior disorders | G. Cardiac disorders |
| B. Emotional disturbance | H. Seizures |
| C. Impaired hearing | I. Mental retardation |
| D. Impaired speech | J. Intellectual
superiority |
| E. Impaired vision | K. Bowel and bladder
incontinence |
| F. Orthopedic disorders | |

A B C D E F G H I J K

Check only one of the three teaching experience contacts described below. Check the one that most nearly matches your own teaching experience with the children whose exceptionalities you have indicated by encircling the letters under Question 2.

1. _____ I have had no teaching contacts with children whose exceptionalities could be listed in the above box.
2. _____ I have had a part-time type of teaching experience contact with the exceptionalities encircled under Question 2. By part-time experience, I mean:
 - a. _____ I am a classroom teacher who has shared the educational program of children with a specialist in the area of the child's impairment.
 - b. _____ I am a special teacher or therapist. The children listed under letter _____ come to me _____ days per week for _____ time allowed.
3. _____ I have had a full-time teaching experience contact with children who could be listed under the exceptionalities encircled under Question 2. By full-time teaching experience contact, I mean:
 - a. _____ I am a regular classroom teacher who has had the entire teaching responsibility for children who could be listed under the exceptionalities encircled under Question 2.

- | | |
|--------------------------|--------------------------------------|
| A. Behavior disorders | G. Cardiac disorders |
| B. Emotional disturbance | H. Seizures |
| C. Impaired hearing | I. Mental retardation |
| D. Impaired speech | J. Intellectual
superiority |
| E. Impaired vision | K. Bowel and bladder
incontinence |
| F. Orthopedic disorders | |

b. _____ I am a special education teacher who has had the entire teaching responsibility for children who could be listed under the exceptionalities encircled under Question 2.

3. This question can be omitted by all those who have had no experience in teaching children whose exceptionalities could be listed under the eleven given in the above box. Teachers and therapists who have had experience with teaching exceptional children should check only one of the following:

1. _____ I have had periodic consultations with a specialist in the areas encircled as follows:

A B C D E F G H I J K

2. _____ I have had no opportunity for consultation with a specialist in the areas encircled here: (Encircle only those with which you have had teaching experience.)

A B C D E F G H I J K

3. _____ As a special teacher or therapist I have given consultations to parents and teachers in the areas encircled here: (Experience only)

A B C D E F G H I J K

4. Check the amount of teaching experience described below that most nearly agrees with your own years of teaching experience with exceptional children:

- | | |
|--------------------------|--------------------------------------|
| A. Behavior disorders | G. Cardiac disorders |
| B. Emotional disturbance | H. Seizures |
| C. Impaired hearing | I. Mental retardation |
| D. Impaired speech | J. Intellectual
superiority |
| E. Impaired vision | K. Bowel and bladder
incontinence |
| F. Orthopedic disorders | |

1. _____ I have had no teaching experience with children who could be listed under any of the exceptionalities listed in the above box.

2. _____ I have had one or more years of part-time experience in teaching children with the exceptionalities I have encircled here:

A B C D E F G H I J K

3. _____ I have had one or more years of full-time experience in teaching children who could be listed under the exceptionalities listed here:

A B C D E F G H I J K

4. _____ The teaching experiences with exceptional children designated by letter(s):

A B C D E F G H I J K

have been within the past five years.

5. _____ I have had little or no teaching experience with exceptional children since 1960 (or during the last five years).

6. _____ With what type of exceptionality (if any) have you had most of your teaching experience contact? (Encircle the appropriate letter.)

A B C D D F G H I J K

- | | |
|--------------------------|--------------------------------------|
| A. Behavior disorders | G. Cardiac disorders |
| B. Emotional disturbance | H. Seizures |
| C. Impaired hearing | I. Mental retardation |
| D. Impaired speech | J. Intellectual
superiority |
| E. Impaired vision | K. Bowel and bladder
incontinence |
| F. Orthopedic disorders | |

5. Assuming that you were to be given a choice, which of the types of exceptionalities would you rather have in your classroom? (Give appropriate letter.) _____

Which type of exceptionality would you least rather have in your classroom to teach? (Give appropriate letter.) _____

6. Check the answer which most nearly matches your future educational goal:
1. _____ It is in my educational plan to become a special education teacher.
 2. _____ I do not plan to become a special education teacher.

APPENDIX D

MEASURING INSTRUMENTS

CLASSROOM INTEGRATION INVENTORY
GENERAL INFORMATION INVENTORY

DIRECTIONS FOR ADMINISTERING

CLASSROOM INTEGRATION INVENTORY*

Teachers are ordinarily faced with a wide variety of problems, arising from the many different kinds of students they work with each day. On the following pages you will find brief descriptions of a number of exceptional children. In each case you are to indicate how you would prefer to handle the situation if the decision were entirely up to you.

General Directions: Make sure that Classroom Integration Inventory and today's date are written in the spaces provided at the side of the answer sheet. Do not write your name on the answer sheet or on any part of the inventory. There are no right or wrong answers to these questions so feel free to indicate how you feel the situation should be handled. Check to see that the number on the left hand corner of the personal data sheet is the same number that is on your answer sheet. It is important to have your number on each of your answer sheets so that the answers of one person can be put together.

Directions for the Second Session only: If you are writing the General Information Inventory at a second session please follow these instructions: Look on the back of your answer sheet and make sure that the number written there is the same number given in the upper left hand corner of the personal data questionnaire. Write your number on the card you'll find in the envelope provided. Fold the card, seal it in the envelope and hand them to me. Then when you return to write on the GII, I will give the envelope back to you so that you can make sure that you put the same number on the back of your answer sheet for the GII. **DON'T FORGET TO WRITE YOUR NAME ON YOUR ENVELOPE!**

READ EACH ITEM AND MARK THE CORRESPONDINGLY NUMBERED SPACE ON THE ANSWER SHEET AS FOLLOWS:

1. If you feel you could handle such a student in your regular classroom without any fundamental change in your present procedures.
2. If you feel you could handle such a student in your regular classroom provided that advice from a specialist or consultant were occasionally made available to you whenever you felt a need for such aid in dealing with some particular problem.

*Reproduced from N. Haring, G. Stern and W. Cruickshank, Attitudes of Educators Towards Exceptional Children. Syracuse University Press, 1958, with the express permission of George G. Stern.

3. If you feel you could handle such a student in your regular classroom provided that a full-time specialist were available at your school who could provide supplementary training for the student and frequent consultation with you.
4. If you feel that such a student would benefit most by being assigned to a special class or school.
5. If you feel that such a child cannot be handled profitably within the context of regular or special public school education.

Mark each item clearly, filling the space between the dotted lines on the special answer sheet. Please do not make any marks in this booklet.

- *1 - In regular classroom
- 2 - With part-time aid
- 3 - With full-time aid
- 4 - In special class or school
- 5 - Not for public education

- 21345 1. Alfred is defiant and stubborn, likely to argue with the teacher, be willfully disobedient, and otherwise interfere with normal classroom discipline.
- 32145 2. Barbara wears thick glasses, and her eye-balls jerk spasmodically from side to side; she can't see the blackboard very well, and reads poorly.
- 43215 3. Chuck can get about only in a wheelchair; someone must move it for him, or carry him in their arms, because he is unable to control any of his limbs.
- 23145 4. Donald is six years old and does not speak very much; what he does say is indistinct and childish, with many missing or incorrect sounds.
- 43215 5. Earl is eight and wears cowboy boots to class because he hasn't learned to tie his own shoe-laces; he is generally cheerful and well-behaved, but talks very little and is incapable of following any but the most simple instructions.
- 23145 6. Florence is immature and oversensitive, likely to burst into tears at the slightest provocation.
- 12345 7. When Alice wears her hearing aid she hears as well as any other youngster; her voice sounds flat and hollow, however, and is somewhat unpleasant to hear.
- 12345 8. Suzy frequently gets so excited she loses control of herself and wets the floor.
- 21345 9. Ruth is very much like other eleven-year-olds in most respects but occasionally, during the day, a rhythmical quiver will pass over her face and she becomes totally oblivious for a few seconds.

*Answer of judges indicated to the left of the item.

- 1 - In regular classroom
- 2 - With part-time aid
- 3 - With full-time aid
- 4 - In special class or school
- 5 - Not for public education

- 12345 10. Roger's face was severely disfigured in an auto accident; although he is completely recovered physically, the surgeons do not expect to be able to make his appearance more acceptable for many years.
- 12345 11. Alan wears a leg brace and walks with the aid of crutches; he gets along quite well by himself though, and ordinarily needs no help from anyone.
- 12345 12. Bernard is a bully, given to teasing other children and provoking fights with them.
- 23145 13. Cora is supposed to have a hearing loss, but she seems to hear all right when she sits at the right end of the front row of seats.
- 12345 14. Debby cannot use bathroom facilities unless someone is there to help her; she is perfectly capable of making her needs known in ample time to avoid accidents.
- 23145 15. Clara has a noticeable scar on her upper lip; her speech seems to be coming through her nose, and she is hard to understand.
- 43215 16. Dotty is eight; she has difficulty following the class, and doesn't seem able to learn to read at all.
- Omitted 17. Eight-year-old Edward sucks his thumb all the time, apparently indifferent to the reactions of parents, teachers, or other children.
- 21345 18. Every few weeks, without any warning, Stella will have a violent physical convulsion during which she may bite her tongue or lose control of her sphincters; after several minutes she returns to consciousness with a severe headache, nausea, and acute feelings of depression.
- 12345 19. Sylvia's height is grotesque; she towers over every other child in elementary school and wears adult-size clothing.

- 1 - In regular classroom
- 2 - With part-time aid
- 3 - With full-time aid
- 4 - In special class or school
- 5 - Not for public education

- 43215 20. Flora has neither bladder nor bowel control and must be taken to the bathroom at frequent intervals.
- 32145 21. David squints through his eye-glasses, even when he sits at the front of the room, and cannot read the blackboard or his book quite as rapidly as many of the other children.
- 23145 22. Occasionally Edward will repeat a sound two or three times before he seems able to go on; he speaks when called on, but does not volunteer much.
- 23145 23. Chuck doesn't seem to catch on to things as quickly as most, and needs to have things explained over and over again; eventually, though, he appears to learn everything the others do even though it has taken longer.
- 23145 24. Doris is slow, absent-minded, and a daydreamer; she seems unusually quiet and withdrawn, avoids others, and is inhibited and restrained in her behavior.
- 12345 25. Every hour or so Henry stares upwards at the ceiling for several seconds and loses consciousness; he has been like this for several years but is otherwise developing normally.
- 43215 26. Fred can feel the vibrations of loud music from a radio or phonograph, knows when a door has been slammed, but does not hear speech unless it is shouted.
- 43215 27. Greg tires easily and needs frequent opportunities to rest; excessive stimulation or excitement must also be avoided.
- 12345 28. Harold is a capable student but he has a physical defect which appears to evoke laughter, ridicule, avoidance and rejection from the other children.
- 21345 29. Irv is sexually precocious; masturbates in class, uses obscene language, and has made advances to several girls in his class.

- 1 - In regular classroom
 - 2 - With part-time aid
 - 3 - With full-time aid
 - 4 - In special class or school
 - 5 - Not for public education
- 43215 30. Jane can tell the direction from which the sunshine enters her classroom; she cannot read the letters in an ordinary book.
- 23145 31. Albert does not pronounce all of his speech sounds correctly, but can be understood.
- 12345 32. Betty is only a little over seven but she can read the fifth grade reader very well; however, her handwriting is poor and she is about average in most other things.
- 32145 33. Chester is deceitful, tells lies, and cheats in school and at play; he has been involved in several thefts, and is a persistent truant.
- 23145 34. Generally speaking, Everett can control his bladder or bowel, although he is likely to have an occasional accident.
- 23145 35. Jerry does perfectly good work as long as he is left alone--he becomes extremely tense and anxious, however, whenever an adult speaks to him.
- 23145 36. Virginia rubs and blinks her eyes occasionally when reading, and seems to find it difficult to distinguish between certain letters of the alphabet.
- 23145 37. Andy hears most, but not everything, that is said in class even though he wears a hearing aid.
- 12345 38. Stan's walk is a slow shuffle; he gets along on level surfaces or moderate inclides quite well, but is unable to manage stairs at all.
- 12345 39. Roy has a bright purple birthmark which covers one cheek and the side of his neck.
- 21345 40. Several times a day Lester says he can smell bananas; usually this means that he will soon fall to the floor in a convulsion which may last for several minutes.

- 1 - In regular classroom
- 2 - With part-time aid
- 3 - With full-time aid
- 4 - In special class or school
- 5 - Not for public education

- 23145 41. Carla is a persistent talker, whisperer and notepasser.
- 12345 42. Bert could play songs with one finger on the piano when he was four; now, in first grade, he has begun composing little melodies to which he gives names like "Rainy Day, "Bert's Bike," or "Juice-Time."
- 12345 43. June's eyes are crossed but she has adequate vision in either eye despite the muscle imbalance.
- 23145 44. Laura's speech is laboriously slow, tortured, jerky and indistinct; her voice is monotonous in pitch and she cannot control its intensity.
- 23145 45. Harry sulks, and sometimes gets quite noisy, whenever he loses the direct attention of the teacher.
- 23145 46. William can't hear anything with his left ear, but he gets along fairly well if he can sit in one row by the window, in a room on the quiet side of the building, with the class to his right.
- 12345 47. Ben is unable to walk and has been confined to a wheelchair; he manages this very skillfully and needs very little help.
- 12345 48. Les was born with a malformed left hand which is withered and misshapen up to the elbow.
- 43215 49. When Terry was five he was run over, losing his legs and genitals; he gets around quite well now but his bladder discharges into a bag which must be emptied several times a day.
- 21345 50. Once or twice during the year Peter has complained of a peculiar feeling in his stomach; about a minute afterwards he has lost consciousness, his breathing has stopped, and his body has been first rigid and then convulsed for several minutes.

- 1 - In regular classroom
- 2 - With part-time aid
- 3 - With full-time aid
- 4 - In special class or school
- 5 - Not for public education

- 21345 51. John has no difficulty on the playground or at the blackboard but he gets quite uncomfortable when he has to use his eyes at close range for any length of time.
- 21345 52. Hugh eventually mutilates or destroys everything that gets into his hands; his books are marked and torn, his desk ink-stained and scarred, and he has even managed to crack a blackboard panel.
- 21345 53. When anything happens to John the whole school knows it--a bump on the playground produces tears and wailing, an A for an exam brings on unrestrained shrieks of delight.
- 12345 54. Sam moves about somewhat awkwardly and his limbs are in a slight but continual tremor that becomes pronounced only when he is nervous or excited.
- 21345 55. Arnold is an extremely bright nine-year-old who is far ahead of the rest of the class in most subjects; he spends a good deal of his time working on a mathematical system he calls "kinestatics."
- 32145 56. Bill has difficulty in starting to talk, grimaces and strains, and repeats sounds on about half the words he says in class.
- 12345 57. Kate weighs enough for two children her age--it is almost impossible for her to squeeze into the standard desk.
- 12345 58. Although Melvin does not really soil himself, as the day draws on he begins to smell more and more of feces.
- 21345 59. A hearing aid provides no help for Harriet; she lip-reads fairly well, and can hear when she is not facing the speaker if shouted at.
- 12345 60. Helen's right hand may sometimes begin to tremble uncontrollably--during the next few minutes the spasmodic movement spreads along her arm, shoulder and head before it finally stops.

GENERAL INFORMATION INVENTORY*

Directions for Second Session:

Now I will return the envelope to the person whose name was written on it. Be sure to check the number you have sealed inside of the envelope before writing it on the back of this second answer sheet. Please write the number carefully on the back of the answer sheet so there will be no chance for error in matching it to your first answer sheet. You must do this first before starting to mark your answers.

General Directions:

At the side of the answer sheet in the spaces provided, write--General Information Inventory and today's date. Read each item and mark the correspondingly numbered space on the answer sheet.

Mark each item clearly, filling the space between the dotted lines on the special answer sheet. Please do not make any marks in this booklet.

*Reproduced from N. Haring, G. Stern and W. Cruickshank, Attitudes of Educators Towards Exceptional Children. Syracuse University Press, 1958, with the express permission of George G. Stern.

*UNDERSTANDING AND GENERAL INFORMATION
ABOUT EXCEPTIONAL CHILDREN

- 3 1. Which of the following is a preferred method of educating mentally handicapped children: (1) to give the child work he can do with his hands (handicraft, weaving), (2) to place the child in a vocational training school, (3) to make the program practical and less academic, (4) to present the same material presented to the average child but allowing more time for practice.
- 4 2. In educating the mentally handicapped (IQ 50-75) child, occupational training should begin: (1) upon entering high school, (2) the second year of high school, (3) the last year of high school, (4) when the child enters school.
- 1 3. The major goal of training the mentally handicapped is: (1) social adequacy, (2) academic proficiency, (3) occupational adequacy, (4) occupational adjustment.
- 2 4. Normal children reject mentally handicapped children because: (1) of their poor learning ability, (2) of unacceptable behavior, (3) they are usually dirty and poor, (4) they do not "catch on."
- 2 5. The emotional needs of mentally handicapped are: (1) stronger than normal children, (2) the same as normal children, (3) not as strong as normal children, (4) nothing to be particularly concerned with.
- 1 6. The proper placement for the slow learner (IQ 75-90) is in: (1) the regular classroom, (2) special class, (3) vocational arts, (4) regular class until age of 16 and then dropped out of school.
- 2 7. In school, the slow learner usually: (1) is given a lot of successful experiences, (2) meets with a great many failures, (3) is a leader, (4) is aggressive.
- 2 8. In grading the slow learner, the teacher should: (1) be realistic, if the child is a failure, fail him, (2) grade him according to his achievement with relation to his ability, (3) not be particularly concerned with a grade, (4) grade him according to his IQ.

*Answer of judges indicated to the left of the item.

- 1 9. The studies with regard to changing intelligence of pre-school children indicate that: (1) intellectual change may be accomplished, (2) no change can be demonstrated, (3) change may take place more readily with older children, (4) the IQ can be increased at least 20 points if accelerated training begins early enough.
- 1 10. The development and organization of a comprehensive educational program for the mentally handicapped is dependent upon: (1) adequate diagnoses, (2) proper training facilities, (3) a psychiatrist, (4) the P.T.A.
- omit-
ted 11. The most value can be gained from a group achievement test: (1) if the test reveals the academic achievement level of the child, (2) if the achievement test can be related to the IQ, (3) if it reveals that the child is academically retarded, (4) if each item of the test is diagnosed with respect to each child.
- 4 12. The mentally handicapped are physically (1) markedly taller, (2) markedly shorter, (3) heavier, (4) about the same as the average child of the same age.
- 2 13. The mentally handicapped child (1) looks quite different from other children, (2) is in need of an educational program especially designed for his needs and characteristics, (3) can never be self-supporting, (4) cannot benefit from any educational program.
- 3 14. The mentally handicapped individual usually becomes: (1) a skilled craftsman, (2) a professional person, (3) a semi-skilled or unskilled laborer, (4) unemployable.
- Omit-
ted 15. The mentally deficient are: (1) potentially employable, (2) potentially unemployable, (3) educable, (4) just slightly below average in intelligence.
- 4 16. The educationally handicapped have: (1) at least average intelligence, (2) superior intelligence only, (3) always have retarded intelligence, (4) may have somewhat retarded, average, or superior intelligence.
- 1 17. The most common educational handicap is: (1) reading, (2) arithmetic, (3) spelling, (4) geography.

- 4 18. The educationally handicapped as a group commonly show all of the following characteristics but one: (1) good emotional adjustment, (2) emotional problems, (3) educational problems, (4) only retarded mentality.
- 4 19. The mentally handicapped have: (1) markedly inferior motor development, (2) superior motor development, (3) superior physical development, (4) about average motor development.
- 2 20. The reaction of the public toward the retarded child seems to be: (1) rejecting, (2) somewhat understanding but not completely accepting, (3) accepting, (4) express feelings of acceptance but really feel rejecting.
- 3 21. Which of the following are not articulatory defects: (1) thome for some (2) wun for run (3) perty for pretty (4) doddie for doggie.
- 2 22. The presence of adenoidal growths may result in (1) nasality (2) denasality (3) hoarseness (4) breathiness.
- 1 23. Which of the following problems is most likely to be associated with mentally retarded: (1) functional articulatory problems (2) cleft palate speech (3) idioglossia (4) stuttering.
- 4 24. The congenital deaf child will probably display: (1) articulatory errors (2) voice abnormalities (3) retarded language growth (4) all of the above.
- 4 25. The deaf, deafened, and hard-of-hearing are different categories based mainly on (1) degree of hearing loss (2) speech development (3) lip reading ability (4) amount of hearing loss and age of onset.
- 2 26. Hard-of-hearing children usually have a decibel loss of: (1) 0-15 (2) 20-60 (3) 70-90 (4) 90-100.
- 2 27. The criticism of the manual method of teaching the deaf is that: (1) it is too difficult to learn (2) it is difficult for these pupils to communicate with hearing people (3) few teachers know the method (4) it is too symbolic.

- 4 28. Educating and rehabilitating the hard-of-hearing is primarily: (1) developing language (2) fitting hearing aids (3) giving audiometric tests (4) teaching lip reading and speech correction and auditory training.
- 1 29. The Oral method of teaching the deaf refers to: (1) teaching by means of speech and lip reading (2) only by auditory training (3) developing speech and language (4) teaching of arithmetic and reading.
- 1 30. The criterion used for placement of a child in a class for the deaf is (1) speech development, intelligence and hearing loss (2) disease causing the loss and intelligence (3) speech development alone (4) hearing loss alone.
- 4 31. Speech correctionists in the public schools do all of the following but one: (1) give speech correction to individual children (2) give lip reading to hard-of-hearing children (3) instruct teachers in methods of speech correction that they can use in their regular classes (4) teach classes for the deaf.
- 2 32. Disorders of articulation refer to all of the following but one: (1) omission of sounds, (2) pitch, (3) distortion of sounds, (4) substitutions of sounds.
- 2 33. Stuttering is often the result of: (1) cleft palate, (2) emotional problems, (3) malformation of the teeth, (4) brain lesions.
- Omit-
ted 34. Which of the following voice problems are likely to be more frequent in high school girls: (1) nasality, (2) breathiness, (3) rapid rate, (4) insufficient loudness.
- Omit-
ted 35. Which one of the following articulatory errors is the most serious contributor to speech unintelligibility: (1) substitution of d for g and t for k, (2) omission of the final consonants in words, (3) distortion of sibilant sounds such as: s,z,sh,th, (4) all of the above will contribute equally to unintelligibility.
- 1 36. With respect to chronological age, the following sounds last to be produced correctly by the child are: (1) r and l, (2) p and b, (3) m,n, and g, (4) f and v.

- 1 37. The most common speech problem among elementary school children is: (1) functional articulatory problems, (2) cleft palate speech, (3) stuttering, (4) voice problems.
- 3 38. According to contemporary research which of the following is the principal etiological factor in stuttering: (1) endocrine disturbances, (2) inadequate cerebral dominance, (3) acquired anxiety relating to speech fluency, (4) hereditary predisposition.
- 3 39. The symptom most diagnostic of stuttering in the young child's speech is: (1) repetition of parts of words, (2) prolonging vowel sounds, (3) attempts to avoid non-fluencies in speech, (4) hesitations between words and phrases.
- 4 40. Teachers help the stuttering child most effectively by: (1) supplying him with words which he cannot say, (2) urging him to relax and speak more slowly, (3) give him as much practice as possible by calling upon him to read more often, (4) waiting for the child to finish speaking regardless of the difficulty he is experiencing, (5) have the child stop and think of what he is going to say.
- 1 41. Functional nasality is usually associated with: (1) inadequate naso-pharyngeal closure, (2) blockage of the nasal pharynx by excessive adenoid tissue, (3) misuse of the vocal cords, (4) speaking on inspiration.
- 3 42. All but one of the following choices affect the thinking and performance of brain injured children: (1) lack of ability to discriminate between essential and non-essential details, (2) evasion from reality, (3) long-attention span, (4) incoherence and flight of ideas.
- 2 43. The most important etiological factor of cerebral palsy is: (1) Rh factor, (2) birth injury, (3) rubella during the first trimester, (4) hereditary.
- 3 44. Which one of the following is not a clinical type of cerebral palsy: (1) spasticity, (2) athetosis, (3) poliomyelitis, (4) rigidity.
- 2 45. The intellectual ability of cerebral-palsied childred as a group is: (1) normal, (2) below normal, (3) above normal, (4) impossible to evaluate.

- 3 46. The principal reason that severe spastics with normal intelligence are sometimes found in institutions for the feeble-minded is: (1) the parents do not want them around, (2) they cannot be helped anyway, (3) it is impossible to obtain an adequate mental test on them, (4) the institution has the best training facilities for them.
- 4 47. Brain injured children display all of the following characteristics except one: (1) disinhibition, (2) distractibility, (3) foreground and background disturbance, (4) high organization ability.
- 1 48. The mentally retarded brain injured child is very frequently described as: (1) an exogenous child, (2) a psychopathic child, (3) an endogenous child, (4) a schizophrenic child.
- 4 49. The classroom to be used for teaching brain injured children should be: (1) very colorful, (2) include much stimuli, (3) have window area, (4) have a minimum amount of stimuli.
- 2 50. In teaching brain injured children, the material such as numbers, letters and figures should be: (1) uniform in size and shape, (2) varied in size, shapes and colors, (3) very small, (4) all the same color.
- 4 51. The most common clinical type of cerebral palsy is: (1) ataxia, (2) athetosis, (3) rigidity, (4) spasticity.
- 1 52. Anoxia is a condition in which the brain: (1) receives insufficient oxygen, (2) is underdeveloped, (3) is too large, (4) has suffered from hemorrhage.
- 3 53. Which one of the following men is not noted for research with regard to brain injury: (1) Martin Palmer, (2) W. M. Cruickshank, (3) Lewis Terman, (4) A. A. Strauss.
- 2 54. Studies have shown that the emotional adjustment of the cerebral palsied as a group is: (1) normal, (2) inadequate, (3) above normal, (4) more adequate in spastics than athetoids.
- 3 55. The emotional adjustment in the home of the cerebral palsied would be expected to be: (1) about the same as the average home, (2) more stable than the average home, (3) probably less stable than the average home, (4) extremely unstable.

- 1 56. The reaction of society as a whole toward the cerebral palsied is: (1) somewhat rejecting, (2) as accepting as toward the normal, (3) completely accepting, (4) completely rejecting.
- 3 57. Poliomyelitis is caused by: (1) heredity, (2) Rh negative, (3) a virus, (4) lack of rest.
- 1 58. Epilepsy is caused by: (1) brain injury, (2) seizures, (3) Rh factor, (4) malnutrition.
- 1 59. Epilepsy occurs in approximately: (1) one person in every 200, (2) one person in every 20, (3) one person in every 400, (4) one person in every 10.
- Omit-
ted 60. In general the clinical type of epileptic seizures in which emotional maladjustment occurs more often is: (1) petit mal, (2) psychomotor attacks, (3) Jacksonian, (4) grand mal.
- 2 61. If one of your pupils has an epileptic seizure you should: (1) run out of the room for help, (2) keep him from getting into a dangerous position, (3) stick your fingers in his mouth to keep him from biting his tongue, (4) rush all of the children out of the room.
- 1 62. After a child has had an epileptic seizure in your room you should: (1) reassure the child and calm his classmates, (2) see that a doctor is called, (3) point out to his classmates that he may be dangerous, (4) send the child home for a week.
- 1 63. Tuberculosis is more prevalent: (1) in cities, (2) in rural areas, (3) areas near water, (4) areas of high altitude.
- Omit-
ted 64. With the exception of accidents, the cause of death in children of school age by rheumatic heart disease is in: (1) second place, (2) first place, (3) tenth place, (4) sixth place.
- 2 65. The major debilitating factor in rheumatic fever: (1) is the weakening of the lungs, (2) involvement of the heart, (3) weakening of the limbs, (4) weakening of the eyes.
- 2 66. In children there are many instances, particularly in adolescence, of obesity which are most frequently caused by: (1) pituitary disorders, (2) excessive intake of food, (3) lack of activity, (4) rapid development.

- 1 67. The gland that has to do with the general metabolic activity is the: (1) thyroid gland, (2) pituitary gland, (3) lymph gland, (4) pancreatic gland.
- 3 68. Social and emotional maladjustment in physically handicapped children: (1) is present in all cases, (2) can be related to their mental ability, (3) is dependent upon the number and severity of the problems, (4) is less of a problem than in normal children.
- 4 69. Studies by means of interviews, observations, and reports of informants indicate that physically disabled persons are: (1) better adjusted than normal children, (2) as well adjusted as normal children, (3) all maladjusted, (4) more frequently maladjusted than physically normal children.
- 1 70. The attitudes of parents toward their disabled children tend to be: (1) oversolicitous, rejecting, (2) accepting, understanding, (3) the same as toward their normal children, (4) more positive than toward their normal children.
- 1 71. The attitude of teachers toward handicapped children is: (1) verbalized acceptance but somewhat rejecting, (2) completely accepting, (3) the same as toward normal children, (4) more understanding.
- 2 72. The attitudes of disabled persons toward themselves tend to be: (1) not significantly different from normal children, (2) negative, (3) accepting, (4) more positive than normal children.
- 1 73. The plan in which the blind child is enrolled with a teacher of blind children in a special room from which he goes to the regular classroom for a portion of his school day is the: (1) cooperative plan, (2) itinerant teacher plan, (3) Dalton plan (4) flexible plan.
- 2 74. The plan in which the blind child is enrolled in the regular class in his home school where his needs are met through the cooperative efforts of the regular teacher and those of the teacher who is made available at certain times to offer this special service is the: (1) cooperative plan, (2) itinerant teacher plan, (3) Dalton plan, (4) integrated plan.

- 3 75. The plan in which the blind child is enrolled in the regular classroom, and has available to him and to his regular teachers a full-time qualified teacher of blind children and also a resource room is the: (1) itinerant teacher plan, (2) cooperative plan, (3) integrated plan, (4) the sharing plan.
- 3 76. The responsibility for the education of exceptional children should be placed upon: (1) the local school districts, (2) the community, (3) the state, (4) the parents of the exceptional children.
- 4 77. An educationally blind child is one who has a visual acuity after correction of: (1) 20/70 to 20/150, (2) 20/150 to 20/200, (3) 20/20 to 20/70, (4) 20/200 or less.
- 2 78. A partially-seeing child is one who has a visual acuity after correction of: (1) 20/20 to 20/60, (2) 20/70 to 20/200, (3) 20/200 to 20/300, (4) 20/300 or less.
- 2 79. The blind: (1) have superior sensory acuity, (2) pay attention to auditory cues more than do seeing people, (3) develop a sixth sense, (4) have markedly superior musical ability.
- 2 80. The school in which the program for the education of the blind is housed should be one in which the enrollment: (1) is made up of blind or partially sighted children, (2) is made up of sighted children, (3) is made up of crippled children, (4) is made up of mentally retarded children.
- 1 81. The realistic goal of the educational program of the blind child should be: (1) to de-emphasize the handicap to the extent that attention is focused on the child, (2) to help the child forget about his blindness, (3) train the child's sixth sense, (4) integrate the child with physically handicapped children.
- 2 82. The most helpful attitude toward the blind child's achievement is: (1) sympathetic, (2) non-sentimental, (3) emotional, (4) narcissistic.
- 4 83. In a school situation, the intellectually gifted differ most from the average in: (1) physical development, (2) motor abilities, (3) participation in athletics, (4) academic achievement.

- 1 84. Gifted children tend to play with children who:
(1) are slightly older, (2) of the same age,
(3) slightly younger, (4) of all ages indiscriminately.
- 2 85. Persons with superior mathematical ability usually have: (1) average intelligence, (2) superior intelligence, (3) slightly retarded intelligence, (4) can do the mathematical manipulations but can put them to no practical use.
- 4 86. The most common method of handling the problem of the gifted child in the public schools today is: (1) special classes, (2) acceleration, (3) multiple track programs, (4) enrichment.
- 1 87. From personality studies of the gifted, we find:
(1) they are better adjusted than most children,
(2) they have an abnormally large number of fears,
(3) they are most apt to become psychotic, (4) they adjust poorly to social conditions.
- 3 88. Which of the following methods is the least effective in helping a child to behave adequately in any particular situation: (1) providing more time for the effective solution of the child's problems, (2) removing psychological restraint upon his behavior, (3) giving the child good advice as to how he should behave, (4) giving him an opportunity to express his feelings.
- 3 89. The most effective method to use in preparing a child to intelligently solve problems in adult life is to: (1) require the child to solve that problem in childhood, (2) give the child good examples of solutions to adult problems, (3) give the child increased opportunity and freedom to differentiate the solution of his own immediate problems, (4) point out to the child the mistakes he makes in his solutions and show him how he could have made a better solution.
- 1 90. In most school room situations the chief motive of the children's behavior and learning is:
(1) their need for self-esteem and a feeling of personal adequacy, (2) their need for learning socially acceptable skills, (3) their need for seeking knowledge, (4) their feeling of superiority.
- 2 91. Habits that children form are a result of: (1) repetition, (2) success in the satisfaction of needs, (3) practice, (4) avoidance techniques.

- 2 92. If repetition is imposed by the teacher in such a manner that the child is unable to notice progress and feels that he is failing, the result usually causes the child to: (1) work harder, in order to find success, (2) discover a technique of avoidance, (3) gain new insights, (4) become encouraged.
- 2 93. To the extent that the schools attempt to develop each child to maximum capacity as a productive and happy member of society, the real test of their success is: (1) the degree to which the pupils can use desirable techniques in school, (2) the degree to which they voluntarily use desirable techniques in their daily living, (3) the degree to which the subject matter is meaningful to them, (4) the degree to which they can transfer the subject matter.
- 4 94. The most effective method of helping a child overcome a phobia is: (1) ignoring the child's fears, (2) removing the child from the object or situation which causes his fears, (3) practical demonstrations of the harmlessness of the object he fears, (4) helping the child to develop skills so that he will be able to cope with the object of his fears.
- 4 95. It is not at all uncommon to find children having educational difficulties during adolescence. This may be a result of: (1) the acceleration in the growth of the central nervous system, (2) preoccupation with gang activities, (3) increased interest in physical activities, (4) accelerated physical growth.
- 4 96. Probably the handicap which is the most widely rejected by society is: (1) visual handicap, (2) orthopedic handicap, (3) hearing handicap, (4) behavior disorder.
- 1 97. The most logical approach to understanding behavior disorders in children is to: (1) understand the cause of the disorder, (2) deal with the symptom, (3) ask the child why he misbehaves, (4) find out from the child's parents why he misbehaves.

PROCEDURES FOR ADMINISTRATION
AN INVESTIGATION OF THE RELATIONSHIPS BETWEEN
KNOWLEDGE OF EXCEPTIONAL CHILDREN,
AND AMOUNT OF EXPERIENCE AND
ATTITUDES TOWARD THEIR
CLASSROOM INTEGRATION

Doris I. Proctor
Michigan State University
East Lansing, Michigan
June, 1965

The specific instructions will vary somewhat from school to school. Nevertheless, the following outline is proposed on the basis of my knowledge of the information and integration inventories questionnaire assigned to collect related personal data.

1. Arrange for two meetings of the staff in each of the ten participating schools. Allow an hour either before or after school for each meeting. Keep a calendar and schedule each school during the conference with their respective principals.
2. Arrange for a meeting room in each of the school buildings. The respondents should have a table on which to write and ample room between respondents to minimize influencing each other.
3. Make sure that the teachers know the reason for the study:

"This is a study which aims to find out the relationship between the amount of knowledge of disabilities, kind and amount of teaching experience and classroom integration of exceptional children. There will be three parts in the data gathering questionnaires: A personal data check list for the purpose of collecting pertinent information on background course credit, kind and amount of experience and future educational goals in relation to special education. The second part will be the classroom integration inventory in which you will find brief descriptions of the behavior of a number of exceptional children.

In each case you are to indicate (by checking one of five possible responses) how you would prefer to handle the situation if the decision were entirely up to you. Remember, there is no right or wrong answer in this part of the questionnaire. Just check the answer that most nearly indicates how you feel about the particular problem. Just answer quickly, with your first idea, and do not spend a lot of time thinking about each item. If there is no answer that particularly fits what you would like to answer, choose the alternative nearest to your desired answer. The third part of the questionnaire is the general information inventory and may be answered at the second meeting. This part consists of questions concerning general information in seven areas of the exceptional child. More than one answer may be correct; however, you are to select the most appropriate answer. There will be no attempt to evaluate you on the basis of this inventory. We merely want to know what information you now have. A special answer sheet will be provided for each of the inventory sections of the questionnaire. Be sure to mark each item clearly, filling the space between the dotted lines on the special answer sheet. Please do not make any marks in the booklet.

Please answer all items.

If you have any questions as you proceed, please raise your hand and I will come to you and discuss it individually so as not to disturb others."

4. Your name is not wanted on the questionnaire. It is desired to keep the respondents anonymous. The plan for doing this is as follows:

"On your desk you will find an envelope with a small slip of paper. Look on the back of your answer sheet for a number. Adopt this number as your number to write on the back of the answer sheet that you will receive at our second meeting. To help you to remember this number, write it on the small slip of paper, seal it in the envelope and place it on my table before you leave. Do not leave the answer sheet and your envelope together. I will return the envelope to you next time so be sure that your name is written clearly on the outside."

5. Distribute the personal data check list and the inventories in the following order:

Order of Administration of Instruments

1. Personal Data check list with identifying number in corner
 2. Classroom Integration Inventory with answer sheet. Be sure that identifying numbers on (1) and (2) match.
 3. General Information Inventory with answer sheet
6. Distribute the Personal Data check list and Integration Inventory. Have the respondents fill out the name of the inventory and the date at the side of the answer sheet. Have them check the back of the answer sheet for a number and copy the number on the slip of paper provided and seal it in the envelope on their desk. Make sure that the respondents read the instructions at the beginning of the classroom inventory and ask any questions before beginning to answer the questionnaire. The instructions are so clearly stated that most of them will be able to proceed without much help. Let them go ahead and finish the questionnaire as soon as possible.
 7. When finished each one should place his answer sheet in a pile on the table designated for that purpose. The envelopes with the concealed identifying numbers should be put in another pile so that name on the envelope does not identify the one who handed in a particular sheet. Put a rubber binder around the envelopes when they are all in and keep them to hand out at the second meeting. The answer sheets should be put into an envelope and kept by the administrator until the second answer sheets are collected with their respective identifying numbers and put with the corresponding answer sheet from the first meeting.

APPENDIX E

THE CODE BOOK

CLASSROOM INTEGRATION
INVENTORY KEY

CODE BOOK

A STUDY ON THE ATTITUDES OF TEACHERS TOWARD
EXCEPTIONAL CHILDREN IN RELATION TO
KNOWLEDGE AND EXPERIENCE

Union School District Study
Jackson, Michigan

Doris I. Proctor
College of Education
Michigan State University
April 18, 1966

INSTRUCTIONS FOR THE USE OF THIS CODE BOOK

1. Code 0 or 00 will always mean Not Applicable or Nothing, except as noted.
2. Code + for a one column no response, or -0 for a two column no response, or -99 for a three column no response will mean there was No Information or Respondent did not answer.
3. In each case in the following pages the column to the left contains the column number of the IBM card; the second column contains the question number from the questionnaire; the third column (item detail) contains an abbreviated form of the item; and the fourth column contains the code within each column of the IBM card with an explanation of the code.
4. Coder instructions always follow a line across the page and are clearly indicated.
5. In some cases when codes are equal to others already used, they are not repeated each time, but reference is made to a previous code or the immediately previous code with "same."
6. Under Code, the first number is the questionnaire question alternative and the second number is the actual code which is entered on the data sheets (i.e., 1-4; one (1) is the questionnaire question alternative and 4 is the code).

Card 1

1-1

Column	Question	Item Detail	Code
1,2	Heading	Type of School and Location	Union School District Jackson, Michigan 11 - Allen 12 - Tomlinson 13 - Bennett 14 - Wilson 15 - Blackman 16 - Admin. 21 - Griswold 22 - Cascades 23 - Longfellow 24 - Lincoln 25 - Blair-Reed
3		Teacher Group Number	1 - Spec. Educ. Tch. 2 - Regular Teacher 3 - Aucil. Personnel 4 - Student Teacher
4,5	Heading	Respondent Number (within schools)	01-30
6	Heading	Sex of Respondent	1 - Masculine 2 - Feminine
7,8	Heading	Total number of Years Taught	01-40
9	Questionnaire I	Course work of Respondent (Specific)	1 - None 2 - Some (1 or 2 terms) 3 - Extensive (1 yr. or more)
10	Questionnaire II	Types Teaching Experience Description	1-1 None 2a-2 Part-time, regular class 2b-3 Part-time, auxilliary 3a-4 Full-time, regular class 3b-5 Full-time, spec. ed. class
11	Questionnaire IV	Amount of Exper. Description	1 - None 2 - Extensive part-time (1 or more years) 3 - Extensive full-time (1 or more years)

Column	Question	Item Detail	Code
12	Questionnaire III	Consultations Description	1 - Periodic con- sultations 2 - No opportunity for consultations 3 - Have given con- sultations
13	Heading	Deck or Card Number	1
14	Questionnaire I	Course work Number of Areas	1 - 9 Record number of different areas of course work indicated by respondent
15	Questionnaire II	Teaching Exper. Number of Areas	1 - 9 Record number of areas of teaching exper. indicated by respondent
16	Questionnaire III	Consultations Number of Areas	1 - 9 Record number of different areas of con- sultations indicated by respondent
17	Questionnaire IV, 2 or 3	Exten. Part; Exten. Full Experience Number of Areas	1 - 9 Record number of different areas of exten- sive part-time or full-time experience indicated by respondent
18	Questionnaire IV	Has the described exper. been within the years 1960-65?	4 - 1 Yes 5 - 2 No

Column	Question	Item Detail	Code
19	Questionnaire IV, 6	Areas of greatest amount of contact ¹	A-1 behavior dis- order B-2 emotional disturbance C-3 impaired hearing D-4 impaired speech E-5 impaired vision F,G,K-6 orthopedic, cardiac, bowel and bladder H-7 seizures I-8 mental retarded J-9 intellectually superior
20	Questionnaire Va	Most desired area ¹	Same as above
21	Questionnaire Vb	Least desired area ¹	Same as in No. 19
22	Questionnaire VI	Future Spec. Ed. Tch. Plans	1-1 Yes 2-2 No
23- 25	CII	Realism Score Total	59-295
26- 27	GII	Knowledge Score Total	01-91

¹If a teacher of the deaf encircled "D" as well as "C,"
record as "C."

If a speech teacher encircled "C" as well as "D," record
as "D."

If a regular classroom teacher encircled "B" as well as
"A," record as "A."

Column	Question	Item Detail	Code	No. Items Per Area
28- 49	CII	Realism Subscores	03-30	A-1 behav. dis. 6 B-2 emot. dis. 5 C-3 imp. hear. 6 D-4 imp. sph. 6 E-5 imp. vis. 6 F-6 ortho. and/or card. 6 G-7 phy. attract. 6 H-8 seizures 6 I-9 men. ret. 3 J-10 intell. super. 3 K-11 spec. handling 6
50- 69	GII	Knowledge Sub- scores	00-18	A-1 behav. dis. 11 B-2 emot. dis. 05 C-3 imp. hear. 07 D-4 imp. sph. 12 E-5 imp. vis. 09 F-6 ortho. 08 G-7 miscell. dis. 10 H-8 seizures 04 I-9 men. ret. 18 J-10 intell. super. 07
70- 71	CII	Degree of Sever- ity Subscores (Severe)	19-95	Same as in 28-49 A-2 B-1 C-2 D-2 E-2 F-2 G-2 H-2 I-1 J-1 K-2
72- 74	CII	Degree of Sever- ity Subscores (Moderate)	20-100	Same as the above except- ing for "B" B-2
75- 77	CII	Degree of Sever- ity Subscores (Slight)	20-100	Same as 72-74

CLASSROOM INTEGRATION INVENTORY

(Haring, Stern and Cruickshank),
Syracuse Univ. Press, 1958

<u>Area</u>	<u>Degree</u>	<u>Items</u>
Emotional Disturbance	Severe	17,24
	Moderate	6,35
	Slight	45,53
Behavior Disorder	Severe	29,33
	Moderate	1,52
	Slight	12,41
Intelligence	Severe	5,55
	Moderate	16,42
	Slight	23,32
Vision	Severe	2,30
	Moderate	21,43
	Slight	36,51
Hearing	Severe	26,59
	Moderate	37,46
	Slight	7,13
Speech	Severe	44,56
	Moderate	4,15
	Slight	22,31
Orthopedic & Cardiac	Severe	3,27
	Moderate	38,47
	Slight	11,54
Physical Attractiveness	Severe	10,19
	Moderate	28,57
	Slight	39,48
Special Handling	Severe	20,49
	Moderate	14,34
	Slight	8,58
Seizure States	Severe	18,40
	Moderate	25,50
	Slight	9,60

APPENDIX F

STATISTICAL MATERIAL

TABLE 31.--Highest correlations selected from eleven sub-score areas of the classroom integration and the general information inventories, listed in order of declining magnitude.

CII Sub-Area	GII Sub-Area	Correlation
Impaired speech	Impaired speech	.247 *
Behavior disorders	Impaired hearing	.242 *
Impaired vision	Mental retardation	.236 *
Emotional disturbance	Emotional disturbance	.232 *
Seizures	Impaired vision	.214 *
Impaired hearing	Mental retardation	.196 *
Mental retardation	Seizures	.194 *
Orthopedic and cardiac	Impaired vision	.173 *
Special handling	Impaired vision	.149 *
Intellectual superior	Seizures	.134
Physical attract.	Impaired vision	.116

* < .05

TABLE 32.--Correlation of classroom integration inventory subscores with class integration inventory total realism score, listed in order of declining magnitude.

RS Subscore Exceptionality Area	RS Total Realism Score Correlation	Number of Items
Seizure States	.65 *	6
Orthopedic	.63 *	6
Special Handling	.62 *	6
Impaired Vision	.59 *	6
Physical Attractiveness	.56 *	6
Impaired Speech	.50 *	6
Impaired Hearing	.46 *	6
Behavior Disorder	.42 *	6
Emotional Disturbance	.28 *	5
Superior Intelligence	.17 *	3
Mental Retardation	.13	3

* < .05.

TABLE 33.--Correlation of classroom integration inventory subscores with general information inventory total knowledge score, listed in order of declining magnitude.

RS Subscore Exceptionality Area	KS Total Score (Knowledge Score) Correlation	Number of Items
Impaired Speech	.23*	6
Behavior Disorder	.18*	6
Seizure States	.18*	6
Emotional Disturbance	.17*	5
Impaired Vision	.16*	6
Impaired Hearing	.15*	6
Mental Retardation	.15*	3
Special Handling	.13	6
Orthopedic	.11	6
Physical Attractiveness	.06	6
Superior Intelligence	.05	3

* < .05.

TABLE 34.--Correlation of general information inventory subscores with general information inventory total knowledge score, listed in order of declining magnitude.

KS Subscore Exceptionality Area	KS Total Score Correlation	Number of Items
Behavior Disorder	.75*	11
Impaired Vision	.72*	9
Orthopedic Disorder	.70*	8
Miscellaneous Disorders	.64*	10
Impaired Speech	.62*	12
Seizures	.58*	4
Superior Intelligence	.56*	7
Impaired Hearing	.55*	7
Mentally Retarded	.53*	18
Emotional Disturbance	.52*	5

* < .05.

TABLE 35.--Correlation of general information inventory subscores with classroom integration inventory total realism score, listed in order of declining magnitude.

KS Subscore Exceptionality Area	Total RS Correlation	Number of Items
Impaired Vision	.27 *	9
Mentally Retarded	.25 *	18
Behavior Disorder	.21 *	11
Orthopedic	.20 *	8
Impaired Hearing	.20 *	7
Emotional Disturbance	.18 *	5
Miscellaneous Disorders	.15 *	10
Seizure States	.13	4
Impaired Speech	.13	12
Superior Intelligence	.01	7

* < .05.