REGULAR-CLASSROOM TEACHERS' ATTITUDES TOWARD MAINSTREAMING HANDICAPPED STUDENTS: A STUDY OF THE STATED ATTITUDE AND ITS RELATION TO SELECTED VARIABLES AND ACCEPTANCE BEHAVIORS

DISSERTATION

Submitted To The Graduate School

of

West Virginia University

In Partial Fulfillment Of The Requirements For

The Degree Of Doctor of Education

by

Alice Crayton Alexander

1983

Acknowledgements

The author is indebted to many individuals for their willing assistance and support throughout this study. The author wishes to extend sincere appreciation to the members of the doctoral committee, namely, Dr. Thomas P. Lombardi, Chairman, Dr. John O. Andes Dr. H. Eugene Hall, Dr. Betsy M. Hobbs, Dr. Bettye L. Jennings, and Dr. Richard T. Walls, for their careful guidance and assistance throughout this study. Gratitude is expressed to Dr. Richard Walls for his assistance in the research design and data analysis phases of this study.

The author also is indebted to Mr. Joseph Pellerzi, Assistant Superintendent of Instruction for the Allegany County (Maryland) Public Schools, for his support of the study and permission to conduct the study in the Allegany County public schools, to the 187 teachers and student interns who participated in the survey, and to the 40 teachers and student interns who permitted the author to observe in their classrooms. Also, the author wishes to acknowledge Dr. Norman Nightingale, Director of Field Services at Frostburg State College (Maryland) for his permission to include Frostburg State College student interns in the study. Thanks are also extended to Dr. Barbara Larrivee for the use of the mainstreaming questionnaire.

The author acknowledges Dr. Richard Sloop for his assistance infield-testing the classroom observation instrument utilized in this study. Appreciation is also extended to Ms. Carol Ruffo for her

assistance in the inter-observer reliability tests. Also,thanks are extended to Ms. Louise mcIlwee for her typing assistance.

The author thanks her husband, Dr. Donald L. Alexander, for typing the final document; her son, Donald, Jr., for his assistance with the graphics presented in the document; and her daughter, Deborah Ann, for her assistance in the preparation of correspondence for mailing. Additionally, the author thanks her family for their support and many sacrifices during the course of this study and the doctoral program.

The author also thanks her parents, Ned and Jane Crayton, for their guidance, dedication, and sacrifices during the author's formative years.

Table of Contents

List of Tables

List of Tables (continued)

List of Figures

CHAPTER I

Introduction, Statement of Problem, and Hypotheses

Introduction

Attitudes are responsible for the way individuals tend to feel and behave toward objects, issues, and other people. The importance of teachers' attitudes on the learning and behavior of students is supported in the literature (Behling, 1981; Good, 1981; Good and Brophy, 1978, 1980; Purkey, 1978; Rosenthal and Jacobson, 1968).

Rosenthal and Jacobson (1968, 1977) were among the first to research the effect of teachers' attitudes, as exemplified through their expectations, on the performance level of children. Their findings suggest that students achieve to the level expected by the teacher. In their study, they administered tests to elementary students, labelling one group "superior" though there were no significant differences in scores between students. Teachers were told to expect significant gains in achievement during the year from the "superior" group. The study findings indicated significant gains in the "superior" group, thus leading the researchers to conclude that teachers' expectations were the cause of the students' achievement gains.

Though there has been a great deal of controversy over the data presented by Rosenthal and Jacobson (1968) (Clairborn, 1969; Good, 1981; Snow, 1969), considerable interest concerning the effect of teachers' attitudes on student performance has been generated and has led to additional research investigating the effect of this variable.

Good (1981) reviewed a decade of research on the effect of teachers' expectations on student achievement and concluded that teachers do respond differently to different students. The teachers' expectations are mirrored in the students' perceptions of their abilities and ultimately in their actual achievement. The question of whether the students create the teachers' expectations via their behavior, or whether teachers create the students' behavior via their expectations, remains unanswered to date. Good (1981, p. 417) concurred with Cooper (1979) on this issue, and added that "at minimum, teachers' expectations and the subsequent behavior sustain differences in student performance levels, even if they do not create them."

Yap (1977, p.38) stated the following:

> Teachers are perhaps the most potent influence on behavior and learning. Pupils are influenced by teachers' behavior, teachers' expectations, and teachers' attitudes toward children...The evidence is ample that teachers' attitudes toward children significantly influence their behavior and social interation in the classroom.

With the recognized importance of teachers' attitudes on the achievement level of students coupled with the passage of Public Law 94-142 -- The Education for All Handicapped Children Act -- the attitude of the regular-classroom teachers toward the handicapped students and mainstreaming has become a vital issue. This is not a new concern, however. Haring (1956, p. 23), in his research 19

years before the passage of Public Law 94-142, stated:

> The attitudes of the regular classroom teachers with whom these children are to be placed present a vital consideration which has not been explored. The success of any plan of integration depends upon how the teacher feels toward the exceptional child.

Similarly, 25 years after Haring's research, and six years after the passage of PL 94-142, Larrivee (1981, p. 34) stated:

> One aspect of integration which has received minimal attention, as compared to administrative concerns, is the importance of the regular teacher's attitude. While education in the least restrictive environment may be imposed by binding laws, the manner in which the regular classroom teacher responds to the special child's needs may be a far more potent variable in ultimately determining the success of mainstreaming than any administrative or curriculum strategy.

A limited amount of research has been conducted since 1975 to investigate the present regular classroom teachers' attitudes toward the handicapped child in the mainstreamed classroom and toward mainstreaming itself. Some of the variables that have been investigated are: 1) teacher characteristics (e. g., age of the teacher, amount of exposure to handicapped children, amount of special training in teaching the handicapped, knowledge of the

regular-classroom teacher concerning handicapped children), 2) institutional characteristics (e. g., perceived amount of administrative support, perceived amount of special service support, size of school, location of school, number of students per classroom), and 3) types of handicapping conditions (e. g., specific categories and general categories).

One variable which has received little attention by researchers is the effectiveness of teacher education programs in establishing appropriate positive attitudes toward the education of handicapped students in the "least restrictive environment." The states' recognition of the importance of course work in special education for education majors and practicing teachers is evidenced by the requirement of special education course work for all presently certified teachers as well as all education majors. Dailey and Halpin (1981) reported that 17 states had such a standard and 13 others planned to establish such a standard. The requirement is understood; the nature of the content as well as the effectiveness have generally not been addressed.

In addition to state requirements, teacher education accrediting associations are requiring special education topics to be included in the regular education program of studies. For example, the National Association of State Directors of Teacher Education and Certification (NASDTEC) Standards require the development of competencies related to the education of handicapped students in teacher education programs (NASDTEC, 1981, p.18). The National Council for Accreditation of Teacher Education (NCATE),

similarly, has added a new standard pertaining to special education. This new standard, 2.1.2. Special Education, states that, "The institution provides its graduates with the knowledge and skills necessary to provide an appropriate education for exceptional learners," (NCATE, 1982, p. 15).

Eight years have passed since the passage of Public Law 94-142. The full implementation of the program to educate all handicapped students in the "least restrictive environment" was mandated to become effective in September, 1978. The need to evaluate the effectiveness of mainstreaming is of importance for the purpose of improving educational programming. As was pointed out earlier, the teachers' attitudes toward the student is a most important variable related to student achievement. Investigating the teachers' attitudes toward educating handicapped students in their classrooms emerges, then, as vital research.

Additionally, measuring the effectiveness of teacher education programs in preparing teachers to successfully educate handicapped students is of equal importance. It is through such investigation that the direction for improving present programs and the development of needed programs in teacher education can be known.

In such attitudinal research, it is recognized that other variables, such as: 1) the perceived level of administrative support, 2) the perceived availability of support services, 3) the type of school (i. e., special wing, full-day resource, half-day resource), 4) the number of handicapped students taught, 5) the grade level taught, and 6) the perceived degree of success in

teaching handicapped students, also may influence teachers' attitudes. Therefore, it is necessary to investigate the influence of these variables on the present attitudes of teachers toward mainstreaming handicapped students.

Likewise, there is a need to investigate the "validity" of the teachers' stated attitude toward mainstreamed students (i. e., the relation that exists between the teachers' stated attitude toward teaching handicapped students in the regular classroom and the teachers' acceptance behavior toward the handicapped student).

Statement of the Problem

Given the importance of positive teacher attitudes toward the handicapped, the need to objectively measure the present teachers' attitudes toward teaching the handicapped emerges as an important study. The educational and support variables that may affect these attitudes are of equal, if not greater, importance. It is through understanding the effect of these variables that the needs of the regular-classroom teachers to effectively educate mainstreamed students can be known. These needs must be understood so that effective planning in public school programs and teacher education programs can be accomplished.

The purposes of the present study, therefore, are as follows:

1. To measure the stated present attitudes of elementary and secondary regular-classroom teachers and student-interns toward educating handicapped students in their classrooms.

toward teaching handicapped students in the regular classroom and the number of handicapped students they have taught. (This hypothesis is stated in the null form because no support in the literature is apparent which predicts that a relation should exixt. The author, however, reasons that a relation may exist, with the teachers who have taught more handicapped students having a more positive attitude).

2. Ho: It is hypothesized that there will be no significant relation between the stated attitude of the regular-classroom teachers toward teaching handicapped children in the regular classroom and the type of school in which the teachers are presently teaching (i. e., half-day resource room, full-day resource room, or special wing). (This hypothesis is stated in the null form because no support in the literature is apparent which predicts that a relation should exist. The author reasons, however, that a relation may exist, with the teachers teaching in schools that have resource teachers in the building all day having a more positive attitude.)

3. Ho: It is hypothesized that there will be no significant relation between the stated attitude of the regular-classroom teachers toward teaching handicapped students in the regular classroom and the year the teachers were certified. (This hypothesis is stated in the null form because no support in the literature is apparent which predicts that a relation should exist. The author reasons, however, that a relation may exist with more recently trained teachers having a more positive attitude.)

4. Ho: It is hypothesized that there will be no significant relation between the stated attitude of the regular-classroom teachers toward teaching handicapped students in the regular classroom and the number of semester hours of special education course work the teachers have taken. (This hypothesis is stated in the null form because no support in the literature is apparent which predicts that a difference should exist. The author reasons, however, that a difference may exist, with the teachers completing more hours of

special education course work having a more positive attitude.)

5. Ho: It is hypothesized that there will be no significant relation between the stated attitude of the regular-classroom teachers toward teaching handicapped children in the regular classroom and their observed acceptance behavior. (This hypothesis is stated in null form because no support in the literature is apparent which predicts that a relation may exist. The author reasons, however, that a significant relation may exist.)

6. H1: It is hypothesized that elementary regular-classroom teachers will have a significantly more positive stated attitude toward teaching handicapped students in the regular classroom than will secondary, regular-classroom teachers. (Larrivee and Cook, 1979.)

7. H1: It is hypothesized that there will be a significant positive relation between the stated attitude of regular-classroom teachers toward teaching handicapped students in the regular classroom and the teachers' perception of the degree of

success they have had in teaching handicapped students. (Larrivee and Cook, 1979.)

8. H1: It is hypothesized that there will be a significant positive relation between the stated attitude of the regular-classroom teachers toward teaching handicapped students in the regular classroom and the teachers' perception of the level of administrative support. (Larrivee and Cook, 1979.)

9. H1: It is hypothesized that there will be a significant positive relation between the stated attitude of regular-classroom teachers toward teaching handicapped students in the regular classroom and the teachers' perception of the availability of support services. (Larrivee and Cook, 1979.)

Limitations of the Study

This study was limited to 1) the regular-classroom teachers of the Allegany County Public Schools, and 2) the regular-classroom student interns (Spring semester, 1983) of Frostburg State College, Frostburg, Maryland. The observation portion of this study was limited to the regular-classroom

teachers and student interns who volunteered for the observation.

CHAPTER II

Review of Literature

Introduction

The effect of teachers' attitudes on the achievement of students has been a topic of research since the late 1960's. Research dealing with this topic has focused on the relation between teachers' attitudes and students' behaviors, the ways teachers demonstrate their attitudes through their observable behaviors, and the variables that may affect the attitudes held by teachers.

Increased interest in teachers' attitudes has surfaced in the 1980's as the result of the passage of Public Law 94-142 (The Education of All Handicapped Children Act). This federal legislation mandated a "free and appropriate public education" for all handicapped children in the "least restrictive environment." A term commonly used as a synonym for the essence of the Act is "mainstreaming."

The increases in educational services provided to the handicapped and the placement of the handicapped to receive these services have been linked to 1) parent activism, 2) professional research findings, and 3) changes in teacher education programs. As a result of these three causal areas, the appropriateness of providing educational services to the handicapped and the placement of the handicapped in the regular school program for the maximum appropriate time were realized.

This chapter presents a review of the literature dealing with 1) the effect of attitude on behavior, 2) the essence of mainstreaming

3) the influence of parent activism, professional research, and teacher education, and 4) the procedures of attitude measurement.

Effect of Attitude on Behavior

The idea that individuals will view themselves and behave in a manner consistent with the expressed attitudes of significant others is supported in the literature (Behling, 1981; Borphy and Good, 1974; Borphy, 1979; Dworkin, 1979; Good, 1981; Purkey, 1978). These expressed attitudes are demonstrated through such behaviors as expectations, encouragements, attentiveness, and evaluations. Purkey (1978, p. 2) stated that the influence of others expressed attitudes have made the difference between whether the individual sees herself as "responsible, capable, and valuable -- or as irresponsible, incapable, and worthless." Others' attitudes, then contribute to individuals' perceptions of their self-worth, and these perceptions are manifested in the individuals' behavior. Purkey (1978) concluded that these self-perceptions are basic ingredients in the individuals' success or failure.

As part of his research, Behling (1981) investigated the research dealing with teacher expectation, and concluded that the teachers' expectations for students are reflected in the students' acheivement levels. The importance of teachers possessing positive attitudes toward their students is, thus, supported. Good (1981, p. 417) concluded, on the basis of his research concerning teacher expectation, that teachers behave differently toward different students. Good stated the following:

This differentiating behavior affects and, over time, will shape students' self-concepts, achievement motivation, and levels of aspiration. High-expectation students will be led to achieve at high levels; low-expectation students' achievement will decline. And, over time, students' achievement and behavior will conform more and more closely to teachers' expectations.

There are several ways in which teachers vary their behavior toward high- and low-achieving students; for example, by:

- Seating slow students farther away from the teacher, making it more difficult to monitor these students or treat them as individuals.
- Paying less attention to slow students by smiling and making eye contact less often.
- Calling on slow students less frequently to answer classroom questions.
- Waiting less time for slower students to answer questions.
- Failing to provide clues or ask follow-up questions in problem situations with slower students.
- Criticizing slower students more frequently for incorrect answers.
- Praising slower students less often for

correct answers.

- Giving slower students less feedback and less detailed feedback.
- Demanding less effort and less work from slower students.
- Interrupting the performance of slower students more frequently.

Teachers' attitudes and teaching behaviors which reflect these attitudes are of particular importance in the 1980's as public school programs begin the full implementation of mainstreaming. The classroom environment, interaction patterns, and instructional strategies, which either include or exclude the handicapped in the classroom, are created by the teacher and are believed to be reflective of the teachers' attitudes. When viewed from the standpoint of the total educational development of the students (i. e., cognitive, social, emotional and physical), the importance of positive teacher attitudes toward the handicapped and toward mainstreaming is recognized.

Jones, Gottleib, Guskin and Yoshida (1978) stated that data concerning the attitudes of teachers, among others, need to be collected to gain an understanding of the true impact of mainstreaming. Measurement of these attitudes collected by attitude questionnaires, interviews, and observations, are appropriate and necessary. The need to understand the present teachers' attitudes, the selected variables that may affect these attitudes, and the predictive validity of these attitudes, are of importance.

The integration of handicapped students into the regular classroom has been of considerable importance to the parents of handicapped children and to educators for a number of years. A study by Haring (1956, p. 1) investigated the attitudes of regular classroom teachers toward exceptional students and their integration into the regular classroom. The interest in integrating exceptional students into the regular classroom evolved, he stated, from the following: "1) the refinement of diagnostic instruments and procedures, 2) the advancement of prosthetic devices for handicapped students, 3) the increased training of specialists and itinerant personnel, 4) the increased number of pre-school training programs for handicapped children, 5) the increased awareness on the part of educators of the educational, social, and emotional needs of exceptional children."

Since the passage of Public Law 94-142 (The Education for All Handicapped Children Act), the integration of handicapped children into the public school program has become not only a concern, but the law. Though this legislation is considered by some Americans to be a major milestone for the handicapped, it is not a first. Frederick J. Weintraub (1977, p. 12) in an editorial comment stated:

> The Education for All Handicapped Children Act of 1975, Public Law (PL) 94-142 represents the standards that have over the past eight years been laid down by the courts, legislatures, and other policy bodies of our country. Further, it represents a continued evolution of the federal

role in the education of children who have handicaps.

Nazzaro (1977) traced the legislation for the handicapped. She states that such legislation dates back to 1879, with the passage of PL 45-196. This law provided funds to produce braille materials. It was not until the 1940's, however, that major legislation took the lead in the education of the handicapped. The Barden-LaFollette Vocational Rehabilitation Act (PL 78-113) of 1943, is considered a major educational milestone. By 1958, the recognition of the need for trained teachers of the mentally retarded precipitated the passage of PL 85-926, which provided funds for colleges and universities to aid in training teachers of the mentally retarded. The 1960's had several important pieces of legislation which dealt with the education of the handicapped. This legislation took such forms as: 1) the provision for the production and distribution of captioned film for the deaf (PL 87-715), 2) funds to train teachers for all disabilities, and research and demonstration projects to study the education of exceptional children (PL 88-164), 3) establishing the National Technical Institute for the Deaf (PL 89-36), 4) authorization for the establishment of the Bureau of Education for the Handicapped and a National Advisory Committee on the Handicapped (PL 89-750) 5) establishment of ten percent of vocational education funds for the handicapped (PL 90-576), 6) provisions for deaf-blind centers, resource centers, and expansion of media services for the handicapped (PL 90-247).

This legislation led to the legislation of the 1970's, most notably: 1) The Vocational Rehabilitation Act (PL 93-112) and 2) The Education for All Handicapped Children Act (PL 94-142). Public Law 94-142 is the legislation that most concerns educators today because of the new role it has created for regular-classroom teachers.

Mainstreaming

Public Law 94-142 speaks of the "free and appropriate public education" for all handicapped children in the "least restrictive environment." One term which is commonly used today as a synonym for the above-quoted phrases is "mainstreaming." In an effort to explain the meaning of the term, the Council for Exceptional Children (1976, p. 43) provides the following definition:

> Mainstreaming is a belief which involves an educational procedure and process for exceptional children, based on the conviction that each such child should be educated in the least restrictive environment in which his educational and related needs can be satisfactorily provided for. This concept recognizes that exceptional children have a wide range of special educational needs, varying greatly in intensity and duration; that there is a recognized continuum of educational settings which may, at a given time, be appropriate for an individual child's needs; that to the maximum extent appropriate, exceptional children should be educated with non-exceptional children; and that

> classes, separate schooling, or other removal of an exceptional child from education with non-exceptional children should occur only when the intensity of the child's special education and related needs is such that they cannot be satisfied in an environment including non-exceptional children, even with the provision of supplementary aids and services.

Mainstreaming has a diverse range of goals for the education of the handicapped. Ashley (1979, p. 47) lists the following as the goals of mainstreaming:

1) to remove the stigma associated with special class placement,
2) to enhance the social status of handicapped children with their non-handicapped peers,
3) to provide a better learning environment,
4) to provide a real world environment,
5) to provide a flexible service delivery mechanism more adaptable to individual children.
6) to enable more children to be served,
7) to provide decentralized services, avoiding costly transportation charges,
8) to avoid legal services involved in segregated classes.

As can be seen by the above definition and goals, mainstreaming is an attempt to address the education of the total handicapped population, and the total educational needs of handicapped individuals in the most effective and efficient manner. To the maximum extent possible, the education of handicapped children is to take place in the regular classroom under the direction of the regular-classroom teacher, with special consultant assistance and special services as needed.

The increased and rapid growth of educational services provided to the handicapped has been linked to three basic causes (i. e., 1. parent activism, 2. professional research, and 3. changes in teacher education practices) (Blackhurst and Berdine, 1981, p. 18). Background information in these three causal areas is helpful in understanding the present "mainstreaming movement."

Parent Activism

Parents of handicapped children have been influential in the development of the present mainstreaming movement in America. This influence has been generated by collective means. That is, parents with similar concerns have joined together in an effort to make the educational needs of their children known, and to seek proper educational provisions for their children through the guaranteed constitutional rights of their children.

In comparison, Lippman (1972) examined the role of parent organizations for the mentally retarded in Europe. He found that there was diversity in the purpose of the parent organization according to the country and its political system. In a country

such as Sweeden, the "pressure" role of organized parents is strong, despite the dominance of the public sector and the committment of all political parties to the provision of social welfare programs. He contrasted East Germany to Sweden. In East Germany, there is no parent organization. The state's role is major with no input mechanism such as Sweden has developed. Lippman concluded by suggesting that the role/purpose of the parents organization is controlled by the relationship between the citizens and the state. In America, the input mechanism is guaranteed under a democratic government. Parent organizations have been formed on a local, state, and national level, and have been influential in the decision-making process of local, state, and national governments. Parent activism in America has been characterized by the organization of parent groups, such as the Association for Children with Learning Disabilities, the National Association of Retarded Citizens, and the United Cerebral Palsy Foundation. These organizations, and ones similar to them, have initiated various legal suits to secure the constitutional rights guaranteed to all American citizens for their handicapped children.

In Pennsylvania Association of Retarded Children v. Commonwealth of Pennsylvania (Pa. 1972), the plaintiffs argued that they had been refused their Fifth Amendment and Fourteenth Amendment rights. It was determined that the Commonwealth was obliged to provide a publically-supported, appropriate education for all mentally retarded children between the ages of six and twenty-one. The Mills v. Board of Education of District of Columbia (D. C.,

1972), another landmark case, extended the obligation of a publically-supported education to handicapped children other than the mentally retarded. This case was brought on the behalf of seven children with varying handicaps. The court stated that, "to deprive any handicapped child an appropriate education is a denial of equal protection and due process guaranteed by the constitution."

The Lebank v. Spears (La., 1973) case set precedence for the parents' role in the educational placement of the child. Additionally, the public obligation of providing an education in a private school, if an appropriate education could not be received locally for the handicapped child, was stipulated.

In addition to these cases, forty-three other "right to education" lawsuits had been filed in twenty-five states by 1974 (Blackhurst and Berdine, 1981, p. 20).

This sampling of court cases indicates the parents' awareness of the guaranteed constitutional rights of the handicapped children, and the parents' determination to secure those rights for their children. Additionally, these parent organizations were influential in the passage of legislation that provided programs and support for handicapped children. Kirk and Gallagher (1979, p. 469-470) stated:

> The parents quickly realized that fundamental changes were needed in the allocation of resources at local, state, and federal levels. No casual or haphazard approach was going to provide much permanent assistance for them or their exceptional children...Accordingly, in the 1940s and 1950s,

> they were able to make an impact directly on state legislators and to effect the passage of legislation that provided state programs and state support for handicapped children. State laws generally took the form of providing financial help that encouraged local school systems to take more responsibility for programming in this area. The parent organizations also were successful in obtaining legislation that provided for additional trained personnel, for needed research, and for a variety of other programs that brought the handicapped to the attention of the general public and also attracted more qualified people into the field to provide a stronger professional base.

Professional Research

Great advancements through research in the fields of education, medicine, educational psychology, social work, and technology brought about a better understanding of the handicapped and their educational needs and potential. Research has provided improved methods for the diagnosis of physical and mental handicapping conditions, improved methods and materials for teaching handicapped children, and the development of prosthetic and orthotic devices for the handicapped. The contributions of research have enabled the handicapped to participate more fully in the "normal" environment.

Haring (1956, p. 2) stated:

> Research has improved methods and instruments

> for diagnosing and assessing exceptionality in children and thus in turn has increased the ability of psychologists and physicians to determine the existence and extent of exceptionality. The error of measurement in physical, intellectual, socioemotional, academic achievement, and aptitude areas has been reduced significantly and can be further reduced by continuous research...Continuous development and refinement of prosthetic devices for children with physical impairments have made it possible for these children to utilize more fully the abilities they have in spite of their disability.

Binet's research in the early 1900's led to his development of an intelligence test. Though intelligence tests have become a controversial issue, it is thought that they have provided important diagnostic information when administered properly and viewed in relationship to other information concerning the child's performance.

Early research concerning the education of the mentally retarded was conducted by a French physician, Jeaan Marc Itard (Lane, 1976). Itard worked with a young uncivilized boy found abandoned in the woods. His work with this boy increased the understanding of the mentally retarded and methods utilized in training the mentally retarded.

Ongoing research has led to continual improvements in methods of teaching the handicapped, and improved learning outcomes for the

handicapped. The research of Piaget and Brunner have increased the understanding of cognitive development and the importance of directing learning to the intellectual stage of development of the learner (Biehler and Snowman, 1982; Blackhurst and Berdine, 1981). The research of Bloom (1964) pointed out the importance of the early learning environment of all children as it influences their later cognitive growth.

Other researchers (Haggerty, 1959; Skeels and Dye, 1939; Saltz, 1973; Spitz, 1945; Spitz and Wolf, 1946), likewise, have pointed out the importance of sensory stimulation during the early childhood years. These findings, coupled with the understanding that many handicapped children may require supplemental sensory stimulation as the result of deficient sensory systems (Adelson and Fraiberg, 1975; Scherzer, 1974; Horton, 1976; Appell, 1977), led to the establishment of programs to provide these necessary sensory stimulations. The federal government was influential in the establishment of these programs through its legislation (e. g., PL 90-538, Handicapped Childrens' Early Education Assistance Act).

Methods for teaching the handicapped of all ages are advanced in several approaches largely from research in the field of psychology (i. e., behavioral, psychodynamic, psychoeducational, ecological, and humanistic). At this time, support for one approach over another is born in the orientation of the individual. Successes with all approaches have been recorded in the literature.

Research has also led to the development of adapted methods and materials that aid the handicapped in their acquisition of knowledge

and in participating more fully in the "normal" environment. Talking books, varying point print material, and tactile materials, all available through the American Printing House for the Blind in Louisville, Kentucky, are examples of available adapted materials for the blind. Various adapted communication systems are now taught to the hearing impaired (i. e., auditory training, speech reading, manual communication, oral communication, and total communication).

Research has also provided technological advancements which have aided the handicapped in their acquisition of knowledge and participation in the "normal" environment. The Kurzweil Reading Machine makes it possible for the visually impaired to have a book read to them. The optacon has made it possible for the visually impaired to tactually read a book from print. Computers are providing a new communication vehicle for speech and language impaired individuals. Battery operated wheel chairs and stair climbing wheel chairs have enabled the orthopedically handicapped to be more mobile. Research has led to a better understanding of individual handicapping conditions, to better diagnostic tools, and to the development of equipment and teaching techniques for the handicapped. As a result of this research, interest in providing the needed educational services for the handicapped has increased.

Changes in Teacher Education Practices

Two movements are evidenced in teacher education programs. The first was the creation of special teacher education programs. These programs were designed to train special teachers to teach the handicapped in special classes/schools. This movement evolved as

the result of the research which advanced the understandings of the educational potential of the handicapped and the development of methods and equipment to teach the handicapped. As research continued, professionals, both within and outside education, began to recognize the appropriateness and importance of the integration of handicapped students into the regular school program. It was this understanding that caused the second movement to evolve. This second movement was the creation of regular teacher education programs that would equip regular classroom teachers with the skills necessary to teach handicapped students in the regular classroom.

This second movement has been made mandatory by Public Law 94-142, and is of great concern today. The teacher education programs in colleges and universities have been charged with the mission of preparing their students to meet the individual needs of the handicapped students in the regular classroom. The integration of material related to the education of the handicapped has become a new and important component of the teacher education programs throughout the country.

Evidence that the required changes are occuring in the regular teacher education programs in order to meet the mandates of Public Law 94-142 are represented by 1) national teacher education accrediting associations requiring the inclusion of special education competencies in the regular teacher education programs (NCATE, 1982; p. 15; NASDTEC, 1981, p. 18), 2) state requirements of special education coursework for teacher certification (Dailey and Halpin, 1981; Maryland State Department of Education, 1982, p. 24).

The effectiveness of this special education training is of concern now. Additionally, there is a concern now for the regular-classroom teachers that were trained prior to the passage of PL 94-142, and thus prior to the inclusion of the special education competencies in the teacher education programs. For these teachers, there exists a discrepancy between the roles they were trained to fill and the roles they are now required to fill. The importance of updated training for regular classroom teachers was pointed out by Browder (1983, p. 301) in the following statement:

> Teachers need training to keep abreast of innovations in working with the handicapped student... In the past, schools may have counted on teacher attrition to introduce innovations and new roles through hiring teachers who have just completed their preservice training. The trend now and in the future may be lower teacher attrition for several reasons, including: 1) the availability of maternity leaves and an increase in working mothers, 2) the economic need for a two-income family, 3) the decrease in job mobility because of the logistics of relocating a two-career family and 4) the impact of teachers' organizations on improving salaries and benefits.

In an attempt to alleviate the above-mentioned discrepancy, some state departments of education are requiring special education course-work or attendance in state-approved special education

workshops for all individuals applying or reapplying for certification. Dailey and Halpin (1981) reported that 17 states had included special education course-work in their certification requirements, and that 13 other states planned to establish this requirement. As an expamle, effective July 1, 1985, the Maryland State Department of Education (1982) will require three hours of special education course-work or state-approved inservice workshops for all applicants applying for professional certification.

Ongoing and active research concerning the nature of the necessary skills of the regular-classroom teachers to educate handicapped students in the regular classroom, and the most effective means for teacher acquisition of these skills is evidenced in the literature (Borg, Ascione, 1982; Dailey and Halpin, 1981; Foster, Ysseldyke, and Reese, 1975; Larrivee, 1981). Likewise, the literature reports the findings of special education workshops and inservice training programs for teacher educators, early-childhood, elementary, and secondary teachers (Brooks and Bransford, 1971; Combs and Harper, 1967; Foster, Ysseldyke, and Reese, 1975; Larrivee, 1981; Lombardi, Meadowcroft and Strasburger, 1982; Rose and Gottlieb, 1981; Wheatley, Shuster, and Schilit, 1983).

To date, a major outcome of the research is that the success of mainstreaming rests in the hands of the regular-classroom teacher and with the teacher education programs. Of major concern is the attitude of the teachers toward mainstreaming and toward the handicapped child. Haring (1956) indicated that the attitudes and

understandings that teachers have about exceptional children are influential in determining the physical, social, intellectual, and emotional adjustment of the children. Mitchell (1976, p. 302) stated that "the attitude of the teacher regarding the exceptional student and his skill development, the adjustment of content of instruction, and the classroom environment or ecology which will include exceptional students, may be a far more potent and important variable in the successful integration of exceptional students into regular classrooms than any administrative or curricular scheme." Martin (1974, p. 71) issued the following warning to all educators involved in mainstreaming:

> I am concerned today about the pell-mell, and I fear naive, mad dash to mainstream children, based upon our hopes of better things for them. I fear we are failing to develop our approach to mainstreaming with a full recognition of the barriers which must be overcome. First, is the question of the attitudes, fears, anxieties, and possibly overt rejection, which may face handicapped children, not just from schoolmates but from the adults in the school.

If mainstreaming is to have the impact on the life of the handicapped child that it is designed to have, if the goals and objectives are to be met, careful consideration to the factors that might affect the child's development must be considered in all decision-making. Investigating the present teacher attitudes toward

mainstreaming and the effect of those attitudes on the integration of the handicapped child into the regular classroom, appears to be an aid in developing an understanding of the present effectiveness of mainstreaming. Investigating the variables that may affect teacher positive and negative attitudes toward mainstreaming should serve as an aid in identifying the needs of the regular classroom teachers in successfully mainstreaming handicapped students. These understandings will be valuable aids for future curriculum planning in teacher education programs and in elementary and secondary school programs.

Attitude Measurement

Remmer (1972, p. 15) stated: "The realization is rapidly growing that attitudes, the way individuals and groups feel about the various aspects of their world, are probably more determinative of behavior than mere cognitive understanding of this world. When this is granted, the importance and value of attitude measurement becomes at once obvious." This understanding coupled with the importance which has been attributed to the attitudes of regular-classroom teachers toward mainstreaming handicapped students causes the issue of the methods to be utilized in measuring attitudes to emerge as a vital concern.

Attitudes are abstract concepts, they are changeable, are subject to rationalization and deception (Henerson, Morris and Fitz-Gibbon, 1982; Remmer, 1972). Given these limitations, the accurate measurement of attitudes is of concern. Remmer (1972, p. 7) lists the following assumptions which must be made in order to measure

attitudes: "...that attitudes are measurable, that they vary along a continuum, that measurable attitudes are common to the group, and that they are held by many people." Henerson, et al (1982, pp. 22-23) advance the following four approaches for evaluating the attitudes of members of a group or groups: 1) self-report measures (i. e., interviews, surveys, polls; questionnaires and attitude rating scales; logs, journals, diaries), 2) reports of others (i. e., interviews, questionnaires, logs, journals, reports), 3) sociometric procedures (i. e., peer ratings, social choice techniques), 4) records (i. e., counselor files, attendance records).

In attitudinal research, careful consideration must be given to the reliability and validity of the results. Reliability may be gained by 1) carefully planned sampling procedures to insure the adequacy and accuracy of the sample, 2) removal of bias in the working of questions, 3) removal of bias in the interview through careful attention to procedures, 4) removal of bias created by incomplete returns by special attention to securing returns. Validity in attitudinal research may be addressed by a valid measurement of the correspondence between the verbal or stated attitude of the individuals of the sample and their behavior (Remmer, 1972, Ch. 1).

Summary

The care and treatment of handicapped individuals has been a major concern of society for generations. The quality of care for the handicapped over the years has been linked directly to the knowledge and understanding society has possessed regarding the

handicapped. As knowledge increased, legislation for more appropriate care and treatment of the handicapped was passed.

The education of the handicapped has been a controversial issue over the years. As the result of professional research, parent activism, and changes in teacher education programs, the appropriateness of providing educational services for the handicapped has been realized. The appropriate educational placement was first conceived as a special class, separate from the non-handicapped. With increased knowledge of the detrimental effects of such "pull out" programs, and with parent activism, legislation to provide educational services to the handicapped to the maximum extent possible in the regular classroom was passed (i. e, Public Law 94-142, The Education of All Handicapped Children's Act.) A term which is commonly used for expressing this concept is "mainstreaming."

Emphasis was placed on the appropriate training of regular-classroom teachers to meet the educational needs of the handicapped following the passage of Public Law 94-142 in 1975. Because of the understanding of the connection between teachers' attitudes and students' achievement, methods for measuring the attitudes of teachers and the variables that affect these attitudes have been studied. This attitude measurement is important to the development of an understanding of the effectiveness of the present mainstreaming movement and the needs of the regular-classroom teachers in providing an appropriate educational experience for handicapped students.

Chapter III

Method

Subjects

Questionnaire. The subjects for the questionnaire section of this study consisted of a thirty percent stratified random sample of all elementary and secondary regular-classroom teachers of the Allegany County Public Schools, Maryland, and all teacher-interns (spring semester) of Frostburg State College, Frostburg, Maryland. Additionally, four secondary regular-classroom teachers that participated in the field testing of the observation instrument utilized in this study, in which a ninety percent or above inter-observer reliability was achieved, were asked to participate in this study.

A thirty percent random sample of all regular-classroom teachers in each school was selected from the Allegany County Directory of Teachers by use of a random numbers table (Shavelson, 1981, p. 638). Permission to use the Allegany County Directory of Teachers was secured from Mr. Joseph Pellerzi, Assistant Superintendent of Schools, Allegany County, Maryland. Permission to have access to the names of the Frostburg State College teacher-interns (spring semester) was secured from Dr. Norman Nightengale, Coordinator of Field Experiences, Frostburg State College, Frostburg, Maryland.

The thirty percent stratified random sample was selected from the 610 eligible regular-classroom teachers from the Allegany County

Public Schools. Of this total number, 265 were elementary regular-classroom teachers, and 345 were secondary regular-classroom teachers. The 30 per-cent stratified-random sample consisted of 80 elementary regular-classroom teachers and 103 secondary regular-classroom teachers. The total sample, including the four secondary regular-classroom teachers that participated in the field testing of the observation instrument, consisted of 187 regular-classroom teachers.

There were a total of 44 elementary and secondary teacher-interns (spring semester) at Frostburg State College, Frostburg, Maryland. Of this total, 16 were elementary teacher-interns and 28 were secondary teacher-interns. All 44 teacher-interns were asked to participate in the study.

The total number of regular-classroom teachers and student-interns selected and asked to participate in this study was 231. Of this total, 96 were elementary and 135 were secondary regular-classroom teachers or teacher-interns.

Of the total 231 regular-classroom teachers and student-interns 187 useable responses were collected, giving a 81 percent useable return.

The distribution according to grade level (i. e., elementary or secondary) and position (i. e., regular-classroom teacher or teacher-intern) and the percentage of return are given in Table 1. Of the total 187 responses, 73 were elementary, regular-classroom teachers, representing a 91 percent response; 76 were secondary regular-classroom teachers, representing 71 percent response; 15

were elementary teacher-interns, representing 94 percent response; and 23 were secondary teacher-interns, representing 82 percent response.

Table 1

Summary of Response According to Grade Level and Position

	n	Percent Returned
Elementary Regular-Classroom Teachers	73	91
Secondary Regular-Classroom Teachers	76	71
Elementary Teacher-Interns	15	94
Secondary Teacher-Interns	23	82
Totals	187	81

Observations. All subjects that indicated that they would permit a one-hour observation of their classroom which contained a mainstreamed handicapped student during a normal interaction instructional class period were included in the observation section of this study. A total of forty regular-classroom teachers and student-interns were found suitable for inclusion in this section of the study under the above description.

Table 2 is a summary of the grade level (i. e., elementary or secondary) and position (i. e., regular-classroom teacher or student-intern) of the subjects included in this section of the study, and

the percentage representation of the total observations. Of the total forty observations, twenty were conducted in elementary classrooms and twenty were conducted in secondary classrooms. Sixteen classrooms were under the direction of an elementary, regular-classroom teacher, representing forty percent of the observations; sixteen were under the direction of a secondary, regular-classroom teacher, representing forty percent of the observations; four were under the direction of elementary teacher-interns, representing ten percent of the observations; and four were under the direction of secondary teacher-interns, representing ten percent of the observations.

Table 2

Summary of the Distribution of Observations According to Grade Level and Position

	n	Percent
Elementary Regular-Classroom Teachers	16	40
Elementary Teacher-Interns	4	10
Secondary Regular-Classroom Teachers	16	40
Secondary Teacher-Interns	4	10

Observations were conducted in eight of the 22 public elementary schools of Allegany County, Maryland, representing 36 percent of the elementary schools, and eight of the 11 public secondary schools of Allegany County, Maryland, representing 73

percent of the secondary schools. Observations were also conducted in one public elementary school in Garrett County, Maryland, and in one public secondary school in Mineral County, West Virginia, because student interns from Frostburg State College were assigned to these schools for their internship experience.

A total of 116 handicapped students were members of the 40 regular classrooms in which observations were conducted. Table 3 presents a summary of the number of students and categories of handicapping conditions represented in the elementary and secondary public school classroom observations.

Setting

The study was conducted in the elementary and secondary public schools of Allegany County, Maryland; one public school in Garrett County, Maryland; and one public school in Mineral County, West Virginia. The two schools outside Allegany County, Maryland, were included, as teacher-interns from Frostburg State College included in this study were assigned to these schools for their internships.

Instrumentation

A Survey of Teacher's Opinions Relative to Mainstreaming Special Needs Children. The questionnaire, A Survey of Teacher's Opinions Relative to Mainstreaming Special Needs Children (STORMS), that was used in this study, was developed by Barbara Larrivee, Rhode Island College, and Linda Cook, Educational Testing Service (Larrivee & Cook, 1979; Larrivee, 1982). The Survey is included in Appendix B.

Table 3

Summary of the Handicapping Conditions, Number of Students and the Grade Level Represented in the Classroom Observations

Handicapping Condition	n Elementary	n Secondary
Specific learning disabled	32	59
Mentally retarded	3	5
Deaf	2	1
Hard of hearing	0	1
Legally blind	1	1
Multiple handicapped	1	0
Speech impaired	1	1
Cerebral palsy	1	1
Orthopedically handicapped	1	0
Down's Syndrome	1	0
Emotionally disturbed	2	0
Hearing/Visual impaired	0	2
Totals	45	71

The attitude scale was constructed by the method of summated ratings. A minimum of five statements of opinion were written corresponding to eight hypothesized factors (i. e., education in general; philosophy of mainstreaming; effect of regular class placement on the social, emotional, and cognitive development of the special needs child; effect of mainstreaming on the social, emotional, and cognitive development of the normal child; special needs child's classroom behavior; special needs child's cognitive functioning; parents of special needs children; and perceived ability to teach the special needs child). The items were subjected to review and items that were identified as double-barreled, leading, or ambigious were edited or discarded. Also, the response continuum was reversed for about half of the statements. Finally, an item analysis was performed, and those items with item-scale correlation coefficients below 0.30 were deleted, resulting in a 30-item scale. The split-half reliability of the scale, as determined by the Spearman-Brown reliability coefficient, was found to be 0.92. Respondents were asked to indicate the extent of their agreement with each statement, using a 5-point scale ranging from "strongly agree" to "strongly disagree." (Larrivee, 1982.)

Larrivee, et al. (1979), randomly selected 250 schools in the six New England states, and mailed 10 of the attitude scales to the principal of each school along with a cover letter requesting that he/she distribute them to a sample of teachers in his/her building and return them in a postage-paid envelope. Of the 250 schools sampled, 136 schools returned questionnaires for a return rate of

54.4 percent. This represented a 50 percent return from each of the six states sampled. The average return rate per school was seven of the ten questionnaires originally sent. (Larrivee, et al., 1979; Larrivee, 1982.)

The responses to the 30-item scale were then intercorrelated and factor analyzed by Larrivee (1982, pp. 316-17). "...the 30 items comprising the attitude scale were intercorrelated and factor analyzed using the SPSS (Statistical Package for the Social Sciences) sub-program, FACTOR. The program computes a principal factor solution retaining only those factors with eigenvalues of one or greater; five factors met this criterion and were used to define the underlying dimensions of the scale. Prior to the interpretation, the obtained solution was rotated using a normalized varimax rotational procedure."

According to Larrivee (1982, pp. 317), only items with factor loadings of 0.37 or greater were considered for interpretation of the factors. A total of 26 items were retained for this purpose. The factor analysis indicated five dimensions underlying teachers' attitudes toward mainstreaming. These aspects were interpreted as attitude toward: a) general philosophy of mainstreaming, b) classroom behavior of special needs children, c) perceived ability to teach the special needs child, d) classroom management with special needs children, and e) academic and social growth of the special needs child."

The rotated factor loadings as presented by Larrivee (1981) are included in Appendix B.

Example questions, from the scale, representing each factor of the scale are as follows (Larrivee, et al., 1979):

Factor 1: Mainstreaming offers mixed-group interaction which will foster understanding and acceptance of differences.

Factor 2: It is likely that a special-needs child will exhibit behavior problems in a regular-classroom setting.

Factor 3: Regular classroom teachers have sufficient training to teach children with special needs.

Factor 4: The extra attention special-needs students require will be to the detriment of the other students.

Factor 5: The challenge of being in a regular classroom will promote the academic growth of the special-needs child.

The scale was designed by Larrivee and Cook (1979) to examine the relation of selected variables to the attitudes (30-item scale) of the regular-classroom teachers toward the mainstreaming process. The selected variables examined are: 1) grade level taught, 2) number of students in a class, 3) number of students in a school, 4) type of school (urban, suburban, rural), 5) degree of teacher success to date in dealing with special needs children in the regular classroom (as perceived by the teacher), 6) the level of administrative support received as perceived by the teacher relative

to special needs students, and 7) the availability of additional support services for accommodating special needs students, such as resource room, resource teacher, remedial reading teacher, counseling, appropriate instructional materials, etc., as perceived by the teacher.

For the purpose of this study, the original selected variables were adapted, and the request for a one hour classroom observation of a handicapped child was included (see Appendix B). The selected variables for this study are: 1) perceived level of administrative support, 2) perceived level of special service support, 3) type of school (special wing, full-day resource room, half-day resource room), 4) grade level taught, 5) number of handicapped students taught, 6) perceived degree of success with handicapped students, 7) the year teacher's certificate was (or will be) received, and 8) amount of coursework in special education.

The attitude scale consists of the original thirty items, and asks the respondents to indicate their extent of agreement with each statement using a five-point scale consisting of the following: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD).

Teacher Classroom Acceptance Behavior. The observation form, Teacher Classroom Acceptance Behavior, that was utilized in this study, was designed and field-tested by the author. The instrument is included in Appendix C. It was designed to be an objective measurement instrument of regular-classroom teachers' positive or negative acceptance behaviors toward handicapped students.

The instrument consists of three parts. The purpose of Part I is to record background data (i. e., handicapping conditions, environmental needs, school, grade level, type of school, number of handicapped students present in the class, and number of non-handicapped students present in the class). Part II of the instrument contains three categories (i. e., 1. needed adaptations in the environment are made for the handicapped, 2. seating of the handicapped for learning, and 3. seating of the handicapped for monitoring).

Part III of the instrument contains five categories, numbered 4 through 8 (i. e., 4. praising students, 5. criticizing students, 6. giving feedback, 7. interrupting students, and 8. calling on students).

Complete directions for coding, interpreting, and scoring with this instrument are included with the instrument in Appendix C.

Categories 3, 4, 5, 6, 7, and 8 were identified by Good (1981) as teacher-behaviors that influence the behavior of students. Categories 1 and 2 were added by the author to check the environmental adaptations specific to the handicapping conditions of the students present in the class.

The observation instrument was designed to measure the positive or negative teacher-acceptance of handicapped students in the regular classroom by observing, 1) their providing or not providing needed environmental adaptations for the handicapped, and 2) their response to the handicapped as compared to their response to the non-handicapped. It is not designed to provide an overall rating of the

teacher's positive or negative attitude toward the entire class.

The original instrument was field-tested in six classrooms, and then modified in format, content, and directions for coding and interpreting according to the data and information collected during the field tests. The final instrument was then field-tested and checked for inter-observer reliability (percentage agreement) in seven classrooms. Six of the seven field tests resulted in a 90 percent or higher reliability. Five additional inter-observer reliability checks were made during the data collection stage of this study. All five of these inter-observer reliability checks achieved a 90 percent or higher reliability. The formula used in computation of this inter-observer reliability was as follows: percentage agreement = agreements/(agreements + disagreements) x 100. A summary of the inter-observer reliability tests of the final instrument is presented in Table 4.

Procedure

Approval to conduct the study was granted by Mr. Joseph Pellerzi, Assistant Superintendent for Instruction, Allegany County Public Schools, Cumberland, Maryland, and Dr. Norman Nightingale, Coordinator of Field Experiences, Frostburg State College, Frostburg, Maryland. Approval to conduct the study was also granted by the West Virginia University Committee on Protection of Human Subjects (see Appendix A).

The observation instrument, Teachers' Classroom Acceptance Behavior, utilized in this study was field-tested in thirteen classrooms. Permission to conduct the field tests was granted by

TABLE 4

Summary of Inter-Observer Testing

Grade/Subject	Coding Reliability Categories 1-3	Coding Reliability Categories 4-8	Scoring Reliability Categories 1-8
7th/Social Sci.	100%	A = 36 D = 2 : 95%	100%
7th/Art	100%	A = 102 D = 3 : 97%	100%
7th/English	100%	A = 131 D = 10 : 93%	100%
8th/Social Sci.	100%	A = 96 D = 5 : 95%	100%
8th/Ind. Arts	100%	A = 133 D = 5 : 96%	100%
8th/English	100%	A = 59 D = 0 : 100%	100%
6th/Math	100%	A = 137 D = 13 : 91%	100%
K/Art	100%	A = 502 D = 12 : 98%	100%
5th/Art	100%	A = 500 D = 15 : 97%	100%
12th/World of Work	100%	A = 307 D = 17 : 95%	100%
9-12/Art	100%	A = 814 D = 15 : 98%	100%

the building principals and the teachers in charge of the classrooms in which field-tests were conducted. One other observer, a Professor of Education at Frostburg State College, was trained to code classroom interaction with this instrument. This other observer participated in seven field-tests with the author to check inter-observer reliability. Six of these seven field tests resuted in a 90 percent or higher inter-observer reliability. The final instrument and report of the field testing was presented to Dr. Thomas Lombardi, chairman of the doctoral committee, and Dr. Richard Walls, doctoral committee member. Approval to utilize the final instrument in this study was granted by these two members.

Permission for use of the questionnaire, Survey of Teacher's Opinions Relative to Mainstreaming Special Needs Children, was granted by the developer of the questionnaire, Dr. Barbara Larrivee, Rhode Island College, Providence, Rhode Island (see Appendix A).

A 30 percent stratified random sample of regular-classroom teachers in the Allegany County Public Schools was selected from the Directory of Allegany County Teachers by use of a random numbers table (Shavelson, 1981, pp. 638-639). Additionally, all teacher-interns (spring semester) from Frostburg State College, Frostburg, Maryland, were selected.

A cover letter (see Appendix A) explaining the study and requesting the teacher's participation in the study was sent by mail to the subjects of the Allegany County Public Schools. The questionnaire, Survey of Teachger's Opinions Relative to Mainstreaming Special Needs Children, and a stamped, self-addressed

envelope was included with the cover letter. An explanation of the study and the questionnaire was presented to the teacher-interns of Frostburg State College at their orientation meeting. These subjects were requested to return their questionnaires to their college supervisor at their subsequent seminar session.

A total of 187 questionnaires were mailed to the Allegany County regular-classroom teachers on January 3, 1983, and a total of 44 questionnaires were given to the Frostburg State College teacher-interns of January 10, 1983. A follow-up letter (see Appendix A) was then mailed on January 20, 1983, to all subjects, and acceptance of response was terminated on February 19, 1983.

All teachers volunteering as subjects for the observation section of this study were contacted by telephone to schedule an appropriate time for such observation. Observations in 40 regular-classrooms were conducted during the months of February and March. All observations were conducted under the following conditions: 1) the handicapped student(s) was/were present in the classroom, and 2) a normal, interactive instructional activity was conducted during the observation session.

One other observer, Ms. Carol Ruffo, a certified elementary and special education teacher, was trained to code classroom interaction and environmental adaptations with the Teacher Classroom Acceptance Behavior observation instrument. Ms. Ruffo participated in five inter-observer reliability checks throughout the data collection stage of this study. The summary of these inter-observer reliability tests is included in Table 4.

CHAPTER IV

Presentation and Interpretation of Data

In order to test the hypotheses of this study, correlations between the stated attitude of the regular-classroom teachers and each of the variables selected for this study were computed for the total sample (i. e., the number of handicapped students which the teachers had taught, the type of school in which the teachers were presently teaching, the year in which the teachers received their teaching certification, the number of hours of special education coursework which the teachers had completed, the grade level which the teachers were teaching, the teachers' perception of the degree of success they have hadteaching handicapped students, the teachers' perception of the level of administrative support relative to teaching handicapped students, and the teachers' perception of the availabiiity of support service relative to teaching handicapped students).

Correlations were then computed between the stated attitude of the regular classroom teachers who volunteered for the classroom observation section of this study and their observed acceptance behavior (i. e., environmental adaptation, interaction, and combined score). Additionally, correlations were computed between the stated attitude of the observation group and the selected variables stated above.

One-way analysis of variance was then conducted to test for any significant difference between: 1) each of the selected variables (as

the independent variable) on the dependent variable of stated attitude for the total sample, 2) each of the observation scores (as the independent variable) on the dependent variable of stated attitude, and 3) each of the selected variables (as the independent variable) on the dependent variable of stated attitude for the observation group. Finally, the Newman-Keuls test of significance was used for all one-way analyses of variance with three or more levels which demonstrated a significant effect to determine which means were statistically different and which means were statistically equal. The harmonic mean was used in each of these tests to correct for the unequal numbers in the groups. All significance tests were conducted utilizing the 0.99 percent level of confidence and the 0.95 percent level of confidence.

To prepare the data for analysis, the following were addressed: 1) the "grade levels" were collapsed into two levels (i. e., level 1 included the elementary grades, kindergarten through grade six, and level 2 included grade seven through grade 12); 2) the "certification dates" were collapsed into two levels (i. e., level 1 included the dates 1943-1974, and level 2 included the dates 1975-1983); 3) the "degree of success," "level of administrative support," and "availability of support service," were all collapsed into three levels (i. e., level 1 included very low and low ratings, level 2 included average ratings, and level 3 included high and very high ratings); and 4) the "number of hours of special education coursework were collapsed into three levels (i. e., level 1 consisted of no hours of coursework, level 2 included two hours

through six hours of course work, and level 3 included seven hours through eighteen hours of course work).

The number of response, means, and standard deviations for the total sample classified by the eight selected variables are presented in Table 5. Figure 1 is a graphical presentation of these mean scores. As can be seen in Figure 1, regular classroom teachers who 1) perceive a high degree of success teaching handicapped students, 2)perceive a high level of administrative support, 3) are more recently certified, and 4) perceive a high availability of support service, hold the highest stated attitude toward teaching handicapped students in the regular classroom. The number of hours of special education coursework, grade level, or number of handicapped students taught appear to not affect stated attitudes toward teaching handicapped students in the regular classroom. Also, secondary regular-classroom teachers appear to have a slightly higher stated attitude (3.20) than do the elementary regular-classroom teachers (3.10).

Table 6 presents a summary of the number of responses, means, and standard deviations for the observation group, as classified by the eight selected variables and the observation scores. Figure 2 is a graphical presentation of the stated attitude scores as classified by the eight selected variables for the observation groups. As can be seen in Figure 2, higher stated attitude scores are held by regular classroom teachers who 1) have taught fewer handicapped students, 2) perceive a high level of administrative support, 3) perceive a high degree of success teaching handicapped

Table 5

Mean Attitude Scores and Standard Deviations of the Total Sample as Classified by Variable

Variable	n	Mean	S. D.
1. Grade Level			
Elementary	88	3.10	0.64
Secondary	99	3.20	0.53
2. Support Service			
Low	38	2.92	0.64
Average	57	3.08	0.59
High	64	3.34	0.49
3. Hrs. of Special Education			
0	56	3.22	0.52
2 - 6	108	3.13	0.62
7 - 18	19	3.23	0.52
4. Year Certified			
1943 - 1974	125	3.07	0.60
1975 - 1983	55	3.43	0.43
5. Type of School			
Half-day Resource	29	3.03	0.70
Full-day Resource	110	3.23	0.55
Special Wing	9	3.20	0.61
6. Admin. Support			
Low	30	2.85	0.65
Average	70	3.04	0.50
High	53	3.44	0.47
7. Number of Handicapped Students Taught			
0 - 3	83	3.16	0.62
4 - 7	33	3.12	0.55
8 - 12	8	3.28	0.43
13 +	56	3.18	0.60
8. Degree of Success			
Low	29	2.85	0.58
Average	96	3.12	0.54
High	31	3.53	0.41

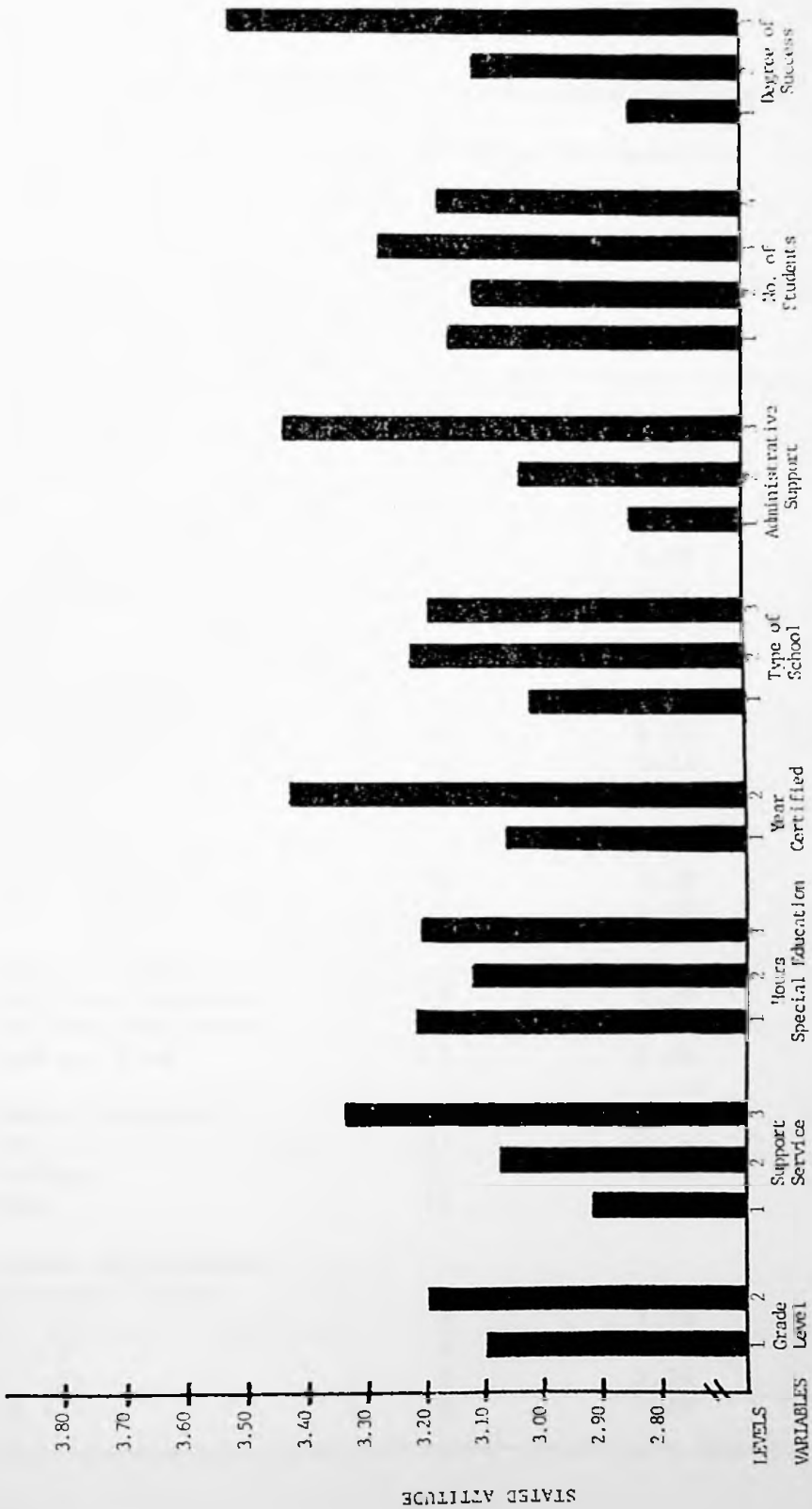

Figure 1 - Stated attitude mean scores for the total sample classified by variables

Table 6

Mean Attitude Scores and Standard Deviations of the Observation Group as Classified by Variable

	Variable	n	Mean	S. D.
1.	Grade Level			
	Elementary	20	3.33	0.61
	Secondary	20	3.33	0.52
2.	Support Service			
	Low	13	3.09	0.57
	Average	11	3.31	0.47
	High	12	3.67	0.43
3.	Hrs. Special Education			
	0	12	3.28	0.57
	2 - 6	23	3.32	0.58
	7 - 18	5	3.51	0.53
4.	Year Certified			
	1960 - 1974	24	3.38	0.56
	1975 - 1983	15	3.35	0.49
5.	Type of School			
	Half-day Resource	6	3.79	0.32
	Full-day Resource	26	3.26	0.54
	Special Wing	7	3.26	0.70
6.	Admin. Support			
	Low	11	3.16	0.70
	Average	13	3.27	0.40
	High	12	3.61	0.43
7.	Number Handicapped Students Taught			
	0 - 3	9	3.70	0.32
	4 - 7	8	3.20	0.41
	8 - 12	3	3.24	0.51
	13 +	20	3.23	0.66

Table 6 (continued)

Variable	n	Mean	S. D.
8. Degree of Success			
Low	3	3.14	0.54
Average	21	3.24	0.59
High	11	3.67	0.28
9. Observation - Combined Score			
Low	9	3.22	0.65
High	31	3.36	0.54
Interaction			
Low	8	3.26	0.70
High	32	3.35	0.53
Environmental			
Low	9	3.37	0.63
High	31	3.32	0.55

students, 4) perceive a high availability of support service, 5) teach in half-day resource room schools, and 6) have taken more semester hours of coursework in special education. There appears to be little difference between the stated attitude of the regular classroom teachers who were certified prior to 1975 and those teachers certified after 1975. Also, mean scores are equal between the stated attitude scores of the elementary and secondary regular-classroom teachers. (Figure 3 presents the stated attitude scores for the observation group classified by the observation variables.)

Null Hypothesis 1: There will be No Significant Relation between the Stated Attitude of the Regular Classroom Teachers toward Teaching Handicapped Students in the Regular Classroom, and the Number of Handicapped Students the Teachers have Taught.

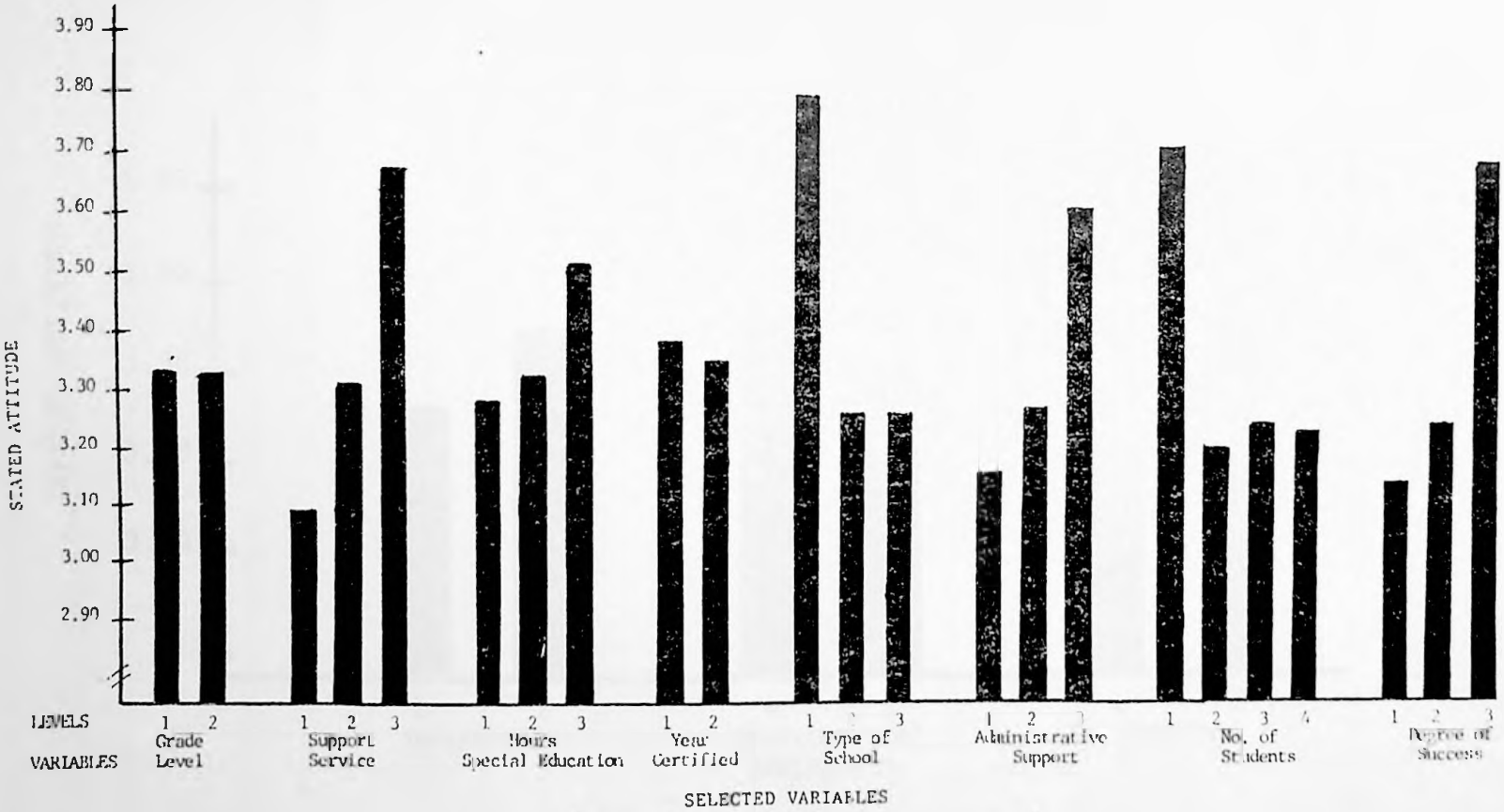

Figure 2 - Stated attitude mean scores for the observation group classified by selected variables.

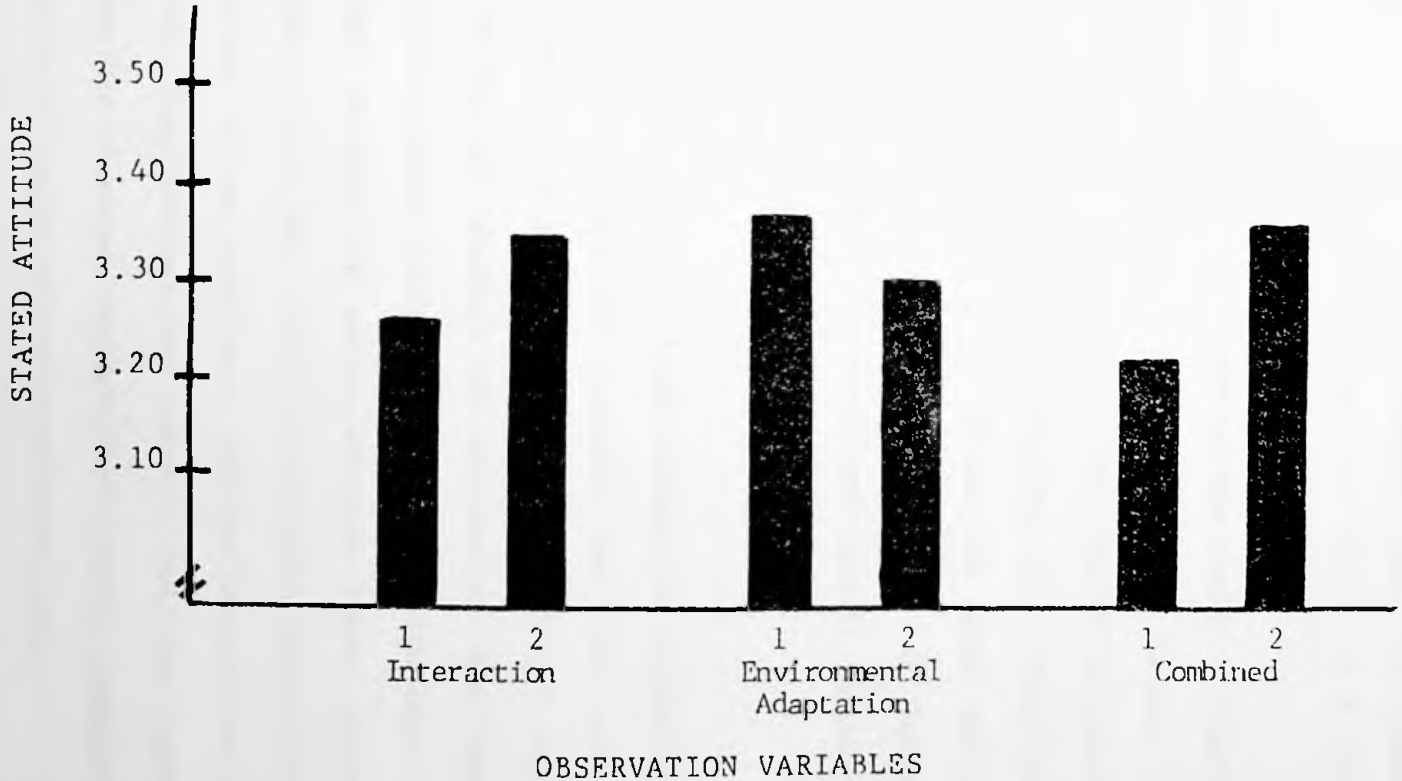

Figure 3 - Stated attitude mean scores for the observation group classified by observational variables.

Total Sample

No significant relation was found between the stated attitude score of the regular-classroom teachers and the number of handicapped students they have taught, r = 0.022, p > 0.05 (see Table 7).

The one-way analysis of variance of the number of handicapped students taught (independent variable with four levels) on the dependent variable of stated attitude score yielded no significant effect, F, 3, 176 = 0.18, p > 0.05 (see Table 13). Thus, the null hypothesis of no significant relation between the stated attitude of the regular-classroom teachers and the number of handicapped students the regular-classroom teachers have taught, appears to be supported, at least for the total sample.

Observation Group

No significant relation was found between the stated attitude score of the regular-classroom teachers and the number of handicapped students they have taught, r = -0.270, p > 0.05 (see Table 8). The one-way analysis of variance of the number of handicapped students taught (independent variable with four levels) on the dependent variable of stated attitude score, yielded no significant effect, F, 3, 36 = 1.74, p > 0.05 (see Table 14). Thus the null hypothesis of no significant relation between the stated attitude of the regular-classroom teachers and the number of students the regular-classroom teachers have taught, appears to be supported by the total sample and the observation group.

Null Hypothesis 2: There will be No Significant Relation Between the

Stated Attitude of the Regular-Classroom Teachers Toward Teaching Handicapped Students in the Regular Classroom and the Type of School in Which the Teachers are Presently Teaching.

Total Sample

No significant relation was found between the stated attitude score of the regular-classroom teachers and the type of school in which the teachers were teaching, $r = 0.089$, $p > 0.05$ (see Table 7). The one-way analysis of variance of the type of school in which the teachers were teaching (independent variable with three levels) on the dependent variable of stated attitude score yielded no significant effect, $F, 2, 146 = 1.37$, $p > 0.05$ (see Table 13). Thus, for the total sample, the null hypothesis appears to be supported.

Observation Group

No significant relation was found between the stated attitude score of the regular-classroom teachers and the type of school in which the teachers were teaching, $r = -0.259$, $p > 0.05$ (see Table 8). The one way analysis of variance of the type of school in which the teachers were teaching (independent variable with three levels) on the dependent variable of stated attitude score, yielded no significant effect, $F, 2, 36 = 2.39$, $p > 0.05$. Thus, the null hypothesis of no significant relation between the stated attitude score of the regular-classroom teachers and the type of school in which the teachers were teaching appears to be supported by the total sample and the observation group.

Null Hypothesis 3: There will be No Significant Relation Between the

Table 7

Intercorrelations Among the Eight Variables and Stated Attitude Scores for the Total Sample

Variable Name	Variable Number 1	2	3	4	5	6	7	8
1. Grade Level								
2. Support Services	-.230							
3. Hrs. Spec. Education	-.193	+.086						
4. Year Certified	+.031	+.076	-.063					
5. Type of School	+.079	+.056	+.039	-.068				
6. Admin. Support	+.082	+.534	+.204	+.076	+.169			
7. No. Hand. Stu. Tgt.	-.039	-.001	+.122	-.155	+.050	+.053		
8. Deg. of Success	+.022	+.237	-.001	+.191	+.185	+.461	+.015	
9. Stated Att. Score	+.087	+.288	-.040	+.288	+.089	+.397	+.022	+.375

Single underline = $p < .05$

Double underline = $p < .01$

Table 8

Intercorrelations Among the Nine Variables and Stated Attitude Scores for the Observation Group

Variable Name	Variable Number 1	2	3	4	5	6	7	8	9
1. Grade Level									
2. Support Services	-.117								
3. Hrs. Spec. Education	+.024	+.116							
4. Year Certified	+.138	+.096	-.181						
5. Type of School	-.043	+.084	+.139	+.220					
6. Admin. Support	-.123	+.748	+.248	+.120	+.086				
7. No. Hand. Stu. Tgt.	+.159	+.339	+.317	-.139	+.075	+.347			
8. Deg. of Success	+.017	+.477	+.050	+.054	+.043	+.613	+.122		
9. Stated Att. Score	+.001	+.448	+.184	-.021	-.259	+.336	-.270	+.367	
10. Combined Obs. Score	+.183	+.188	+.155	+.105	+.176	+.252	-.103	-.043	+.183

Single underline = $p < .05$

Double underline = $p < .01$

Stated Attitude of the Regular-Classroom Teachers Toward Teaching Handicapped Students in the Regular Classroom and the Year the Teachers Received Their Teaching Certification.

Total Sample

A significant relation was found between the stated attitude of the regular-classroom teachers and the year they received their teaching certification, $r = 0.288$, $p < 0.01$ (see Table 7). The one-way analysis of variance of the year the teachers received their teaching certification (independent variable with two levels) on the dependent variable of stated attitude score, yielded a significant effect, F, 1, 178 = 16.07, $p < 0.01$ (see Table 13). Figure 4 is a graphical presentation of the mean scores of the teachers certified before 1975 and after 1975 for the total sample and the observation group. As can be seen in Figure 4, for the total sample, the teachers certified after 1975 have a higher mean score than do the teachers certified prior to 1975. Thus, the null hypothesis of no significant relation between the stated attitude of the regular-classroom teachers and the year the teachers received their teaching certification appears to not be supported.

Observation Group

No significant relation was found between the stated attitude of the regular classroom teachers and the year they were certified, $r = -0.021$, $p > 0.05$ (see Table 8). The one-way analysis of variance of the year the teachers received their teaching certification (independent variable with two levels) on the dependent variable of stated attitude score, yielded no significant

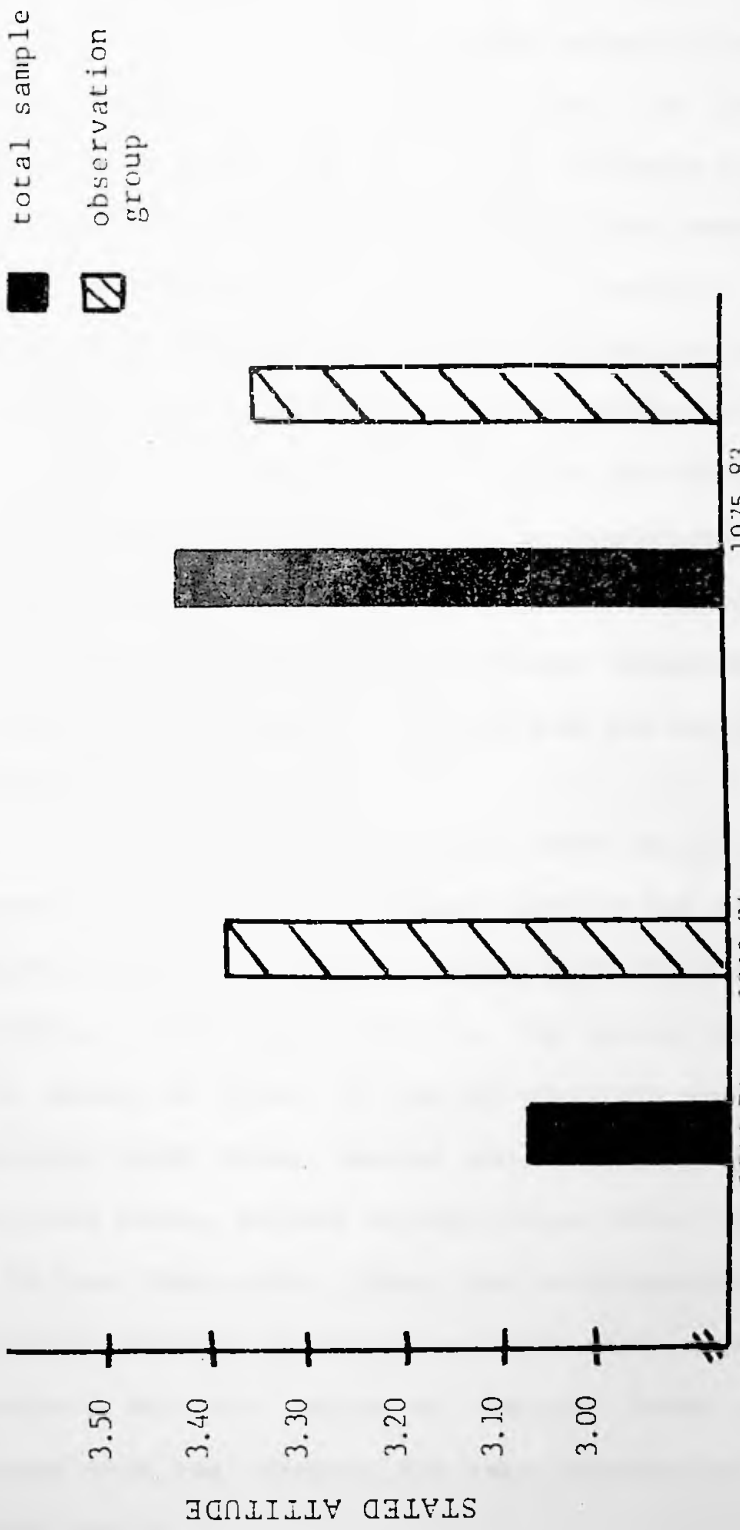

Figure 4 - Stated attitude mean score for the total sample and the observation group classified by year of certification.

effect, F, 1, 37 = 0.02, p > 0.05 (see Table 14). Figure 4 is a graphical presentation of the mean scores of the teachers certified before 1975 and after 1975 for both the total sample and the observation group. As can be seen in Figure 4, the stated attitude mean scores for the observation group are nearly equal. Thus, the null hypothesis of no significant relation between the stated attitude of the regular classroom teachers and the year the teachers received their teaching certificate, appears to be supported for the observation group and not supported by the total sample.

Null Hypothesis 4: There will be No Significant Relation Between the Stated Attitude of Regular-Classroom Teachers Toward Teaching Handicapped Students in the Regular Classroom and the Number of Hours of Special Education Course Work the Teachers Have Taken.

Total Sample

No significant relation was found between the stated attitude score of the regular-classroom teachers and the number of semester hours of special education course work the teachers had taken, r = -0.040, p > 0.05 (see Table 7). The one-way analysis of variance of the number of hours of special education course work (independent variable with three levels) on the dependent variable of stated attitude score, yielded no significant effect, F, 2, 180 = 0.49, p > 0.05 (see Table 13). Thus, the null hypothesis of no significant relation between the stated attitude score of the regular classroom teachers and the number of semester hours of special education course work the teachers had taken appears to be supported for the total sample.

Observation Group

No significant relation was found between the stated attitude of the regular classroom teachers and the number of hours of special education course work the teachers had taken, $r = 0.184$, $p > 0.05$ (see Table 8). The one-way analysis of variance of number of hours of special education course work (independent variable with three levels) on the dependent variable of stated attitude score, yielded no significant effect, F, 2, 37 = 0.30, $p > 0.05$ (see Table 14). Thus, the null hypothesis of no significant relation between the stated attitude of the regular classroom teachers and the number of semester hours of special education course work the teachers have taken appears to be supported for the observation group as well as for the total sample.

Null Hypothesis 5: There will be No Significant Relation Between the Stated Attitude of the Regular-Classroom Teachers Toward Teaching Handicapped Children in the Regular Classroom and the Observed Acceptance Behavior of the Regular Classroom Teachers.

Observation Group

No significant relation was found between the stated attitude of the regular classroom teachers and the observed acceptance behavior of the regular classroom teachers. This finding was true for the environmental score of the observed acceptance behavior, $r = 0.160$, $p > 0.05$; the interaction score of the observed acceptance behavior, $r = 0.070$, $p > 0.05$; and the combined score of the observed acceptance behavior, $r = 0.183$, $p > 0.05$ (see Table 9).

Table 9

Intercorrelation Among the Environmental,

Interaction, and Combined Scores

Variable Name	Variable 1	2	3	4	5
1. Environmental					
2. Interaction	.295				
3. Combined	.823	.740			
4. Stated Attitude Score	.160	.070	.183		

Single underline = $p < .05$

Double underline = $p < .01$

The one-way analysis of variance of the environmental score (independent variable with two levels) on the dependent variable of stated attitude score yielded no significant effect, F 1, 38 = 0.05, $p > 0.05$. The one-way analysis of variance of the interaction score (independent variable with two levels) on the dependent variable of stated attitude score yielded no significant effect, F 1, 38 = 0.19, $p > 0.05$. Likewise, the one-way analysis of variance of the combined score (independent variable with two levels) on the dependent variable of stated attitude score, yielded no significant effect, F 1, 38 = 0.44, $p > 0.05$.

Table 10 presents a summary of the one-way analysis of the observation scores on the stated attitude score. Thus, the null

hypothesis of no significant relation between the stated attitude of the regular classroom teachers and the observed acceptance behavior of the regular classroom teachers appears to be supported by this observed group.

Table 10

One-Way Analysis of Variance of the Observation Scores on the Stated Attitude Scores

Source	df	MS	F
Environmental	1	.32	.05
Interaction	1	.32	.19
Combined Scores	1	.32	.44

Hypothesis 6: The Stated Attitude of the Elementary Regular Classroom Teachers will be Significantly More Positive than the Stated Attitude of the Secondary Regular Classroom Teachers.

Total Sample

No significant relation was found between the stated attitude of the elementary regular classroom teachers and the stated attitude of the secondary regular classroom teachers, $r = 0.087$, $p > 0.05$ (see Table 7). The one-way analysis of variance with two levels on the dependent variable of stated attitude yielded no significant effect, F 1, 185 = 1.42, $p > 0.05$ (see Table 13).

Additional one-way analysis of variance of grade level (independent variable with two levels) on all other selected variables (i. e., 1. number of handicapped students taught, 2. type of school, 3. year of certification, 4. semester hours of special education course work, 5. degree of success, 6. level of administrative support, and 7. availability of support service) were computed. Support service as the dependent variable yielded a significant effect F 1, 157 = 9.52, $p < 0.01$. The mean scores for the dependent variable support service presented in Table 11 and in Figure 5, illustrate that the elementary regular classroom teachers perceived a higher availability of support service than the secondary regular classroom teachers. With all other variables as the dependent variable, no significant effect was found. Thus, the hypothesis that elementary regular classroom teachers would have a significantly more positive attitude than the secondary regular classroom teachers appears to not be supported for the total sample.

Additionally, no significant difference appears to be present between the elementary regular classroom teachers and the secondary regular classroom teachers of the total sample in their perceived level of administrative support or their perceived level of success teaching handicapped students. Both groups appear to be predominantly made up of teachers certified prior to 1975, and appear to be presently teaching in schools predominantly consisting of full-day resource rooms. Each group appears to have experienced teaching a similar number of handicapped students and to have taken a similar number of semester hours of special education course

Table 11

One-Way Analysis of Variance: Elementary Regular Classroom Teachers Vs. Secondary Regular Classroom Teachers for the Total Sample

Dependent Variable	df	F	p	Ele. n	Ele. mean	Sec. n	Sec. mean
Handicapped Students Tgt.	1	.27	>.05	85	2.26	95	2.16
Type of School	1	.93	>.05	79	1.84	70	1.91
Year Certified	1	.17	>.05	86	1.29	94	1.31
Hours of Special Ed.	1	1.25	>.05	87	4.01	96	3.38
Degree of Success	1	.17	>.05	83	2.96	73	3.01
Administrative Support	1	2.81	>.05	83	3.28	70	3.01
Support Service	1	9.52	<.01	84	3.39	75	2.88
Stated Attitude	1	1.42	>.05	88	3.09	99	3.20

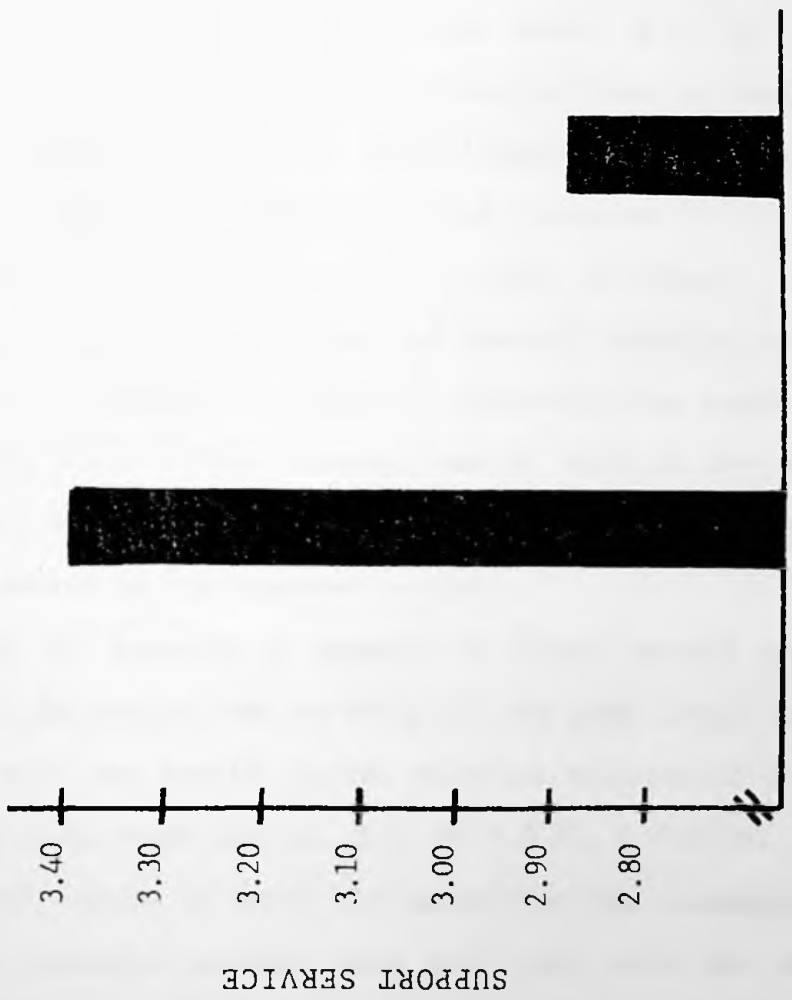

Figure 5 - Perceived availability of support service by grade level.

work. The perceived level of support service provided appears to be higher among the elementary regular classroom teachers than the secondary regular classroom teachers.

Observation Group

No significant relation was found between the stated attitude of the elementary regular classroom teachers and the stated attitude of the secondary regular classroom teachers, $r = 0.001$, $p > 0.05$ (see Table 8). The one-way analysis of variance of the grade level (independent variable with two levels) on the dependent variable of attitude score, yielded no significant effect, F 1, 38 = 0.00, $p > 0.05$ (see Table 14). Additional one-way analysis of variance tests were conducted on the grade level (independent variable with two levels) and each of the other selected variables (i. e., 1. number of handicapped students taught, 2. type of school, 3. year of certification, 4. semester hours of special education course work, 5. degree of success, 6. level of administrative support, and 7. availability of support service) and on each of the observation scores (i. e., 1. environmental adaptation, 2. interaction, and 3. combined score) as the dependent variable.

Table 12 presents a summary of these one-way analyses of variance. As can be seen in Table 12, the grade level (independent variable with two levels) on the dependent variable of interaction, yielded a significant effect, F 1, 38 = 6.22, $p < 0.05$. The grade level means (shown in Table 12) report that the elementary regular classroom teachers interact more positively with the handicapped students in their classes than do the secondary regular classroom

Table 12

One-Way Analysis of Variance: Elementary Regular Classroom Teachers Vs. Secondary Regular Classroom Teachers for the Observation Group

Dependent Variable	df	F	p	Ele. n	Ele. mean	Sec. n	Sec. mean
Handicapped Students Tgt.	1	.99	>.05	20	2.65	20	3.05
Type of School	1	.07	>.05	20	2.05	19	2.00
Year Certified	1	.72	>.05	20	1.45	19	1.31
Hours of Special Ed.	1	.02	>.05	20	3.70	20	3.90
Degree of Success	1	.01	>.05	19	3.21	16	3.19
Administrative Support	1	.52	>.05	19	3.11	17	2.82
Support Service	1	.47	>.05	19	3.05	17	2.76
Stated Attitude	1	.00	>.05	20	3.33	20	3.33
Environ. Observ. Score	1	.08	>.05	20	.91	20	.89
Interact. Observ. Score	1	6.22	<.05	20	.98	20	.83
Combined Score	1	1.99	>.05	20	1.89	20	1.74

teachers. All other one-way analyses of the grade level (independent variable with two levels) on the dependent variable of each selected variable and observation score, yielded no significant effect (see Table 12).

Thus, the hypothesis of elementary regular classroom teachers having a significantly more positive stated attitude toward teaching handicapped students than the secondary regular classroom teachers appears to not be supported by the observation group nor the total sample. However, the elementary regular classroom teachers appear to interact more positively with the handicapped students in their classroom than do secondary regular classroom teachers. Also, the preceived level of support service provided appears to be higher for elementary regular classroom teachers than for secondary regular classroom teachers for the total sample. This finding is not true for the observation group, however.

Hypothesis 7: There Will Be a Significant Positive Relation between the Stated Attitude of the Regular Classroom Teachers Toward Teaching Handicapped Students in the Regular Classroom and Their Perceived Degree of Success Teaching Handicapped Students.

Total Sample

A significant positive relation was found between the stated attitude scores of the regular classroom teachers and the degree of success that the teachers perceived they have had teaching handicapped students in the regular classroom, $r = 0.375$, $p < 0.01$ (see Table 7). The one-way analysis of variance of degree of success (independent variable with three levels) on the dependent

variable of attitude score, yielded a significant effect, F 2, 153 = 12.94, $p < 0.01$ (see Table 13). The Newman-Keuls multiple comparison test yielded a significant difference at the .01 level between the stated attitude mean scores of levels 1 and 3, Q = 6.80. No significant difference was found between the other levels. Figure 6 depicts the stated attitude mean scores of the total sample for the three levels of the perceived degree of success.

Thus, the hypothesis that a significant relation exists between the stated attitude of regular classroom teachers toward teaching handicapped students in the regular classroom and their perceived degree of success teaching handicapped students, appears to be supported for the total sample.

Observation Group

A significant relation was found between the teachers stated attitude toward teaching handicapped students in the regular classroom and their perceived degree of success teaching handicapped students, $r = 0.367$, $p < 0.05$ (see Table 8). The one-way analysis of variance for degree of success (independent variable with three levels) on the dependent variable of attitude score, yielded no significant effect, F 2, 32 = 2.89, $p > 0.05$ (see Table 14).

Thus, the hypothesis of a significant positive relation between the stated attitude of the regular classroom teachers toward teaching handicapped students in the regular classroom and their perceived degree of success teaching handicapped students, appears to be supported by the total sample and partially supported by the observation group.

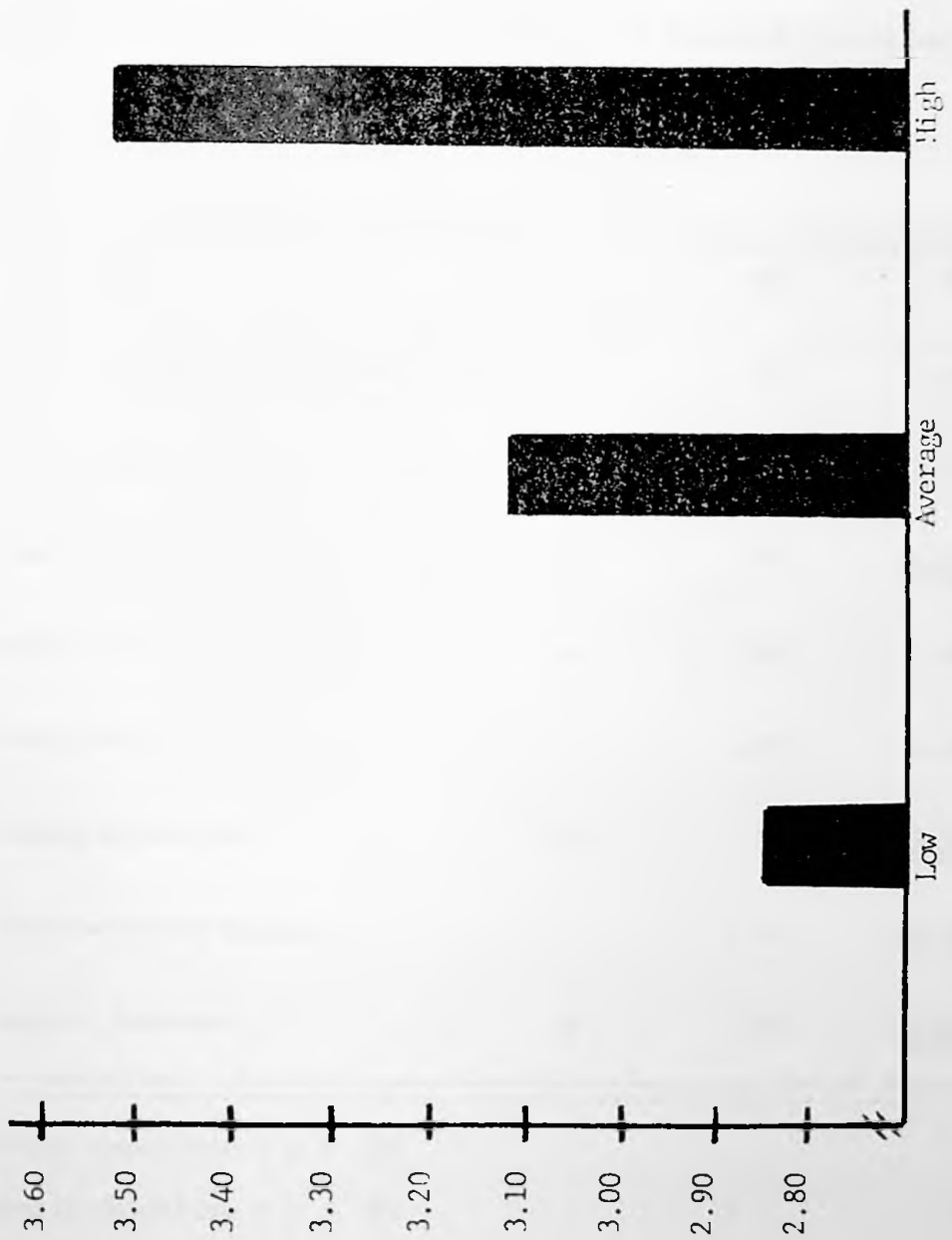

Figure 6 - Stated attitude mean scores of the total sample by perceived degree of success.

Table 13

One-Way Analysis of Variance of the Selected Variables on the Dependent Variable of Attitude Score for the Total Sample

Source	df	MS	F
Number of Handicapped Students	3	.35	.18
Type of School	2	.34	1.37
Year of Certification	1	.30	<u>16.07</u>
Hours of Spec. Ed. Course Work	2	.34	.49
Grade Level	1	.34	1.42
Degree of Success	2	.28	<u>12.94</u>
Administrative Support	2	2.72	<u>14.88</u>
Support Service	2	.32	<u>7.20</u>

Single underline = $p < .05$

Double underline = $p < .01$

Table 14

One-Way Analysis of Variance of the Selected Variables on the Dependent Variable of Attitude Score for the Observation Group

Source	df	MS	F
Number of Handicapped Students	3	.30	1.74
Type of School	2	.30	2.39
Year of Certification	1	.28	.02
Hours of Spec. Ed. Course Work	2	.33	.30
Observed Acceptance Behavior	1	.32	.44
Grade Level	1	.32	.00
Degree of Success	2	.26	2.89
Administrative Support	2	.30	2.36
Support Service	2	.24	<u>4.23</u>

Single underline = $p < .05$

Double underline = $p < .01$

Hypothesis 8: There Will Be a Significant Positive Relation Between the Stated Attitude of the Regular Classroom Teachers toward Teaching Handicapped Students in the Regular Classroom and the Teachers' Perception of the Level of Administrative Support.

Total Sample

A significant positive relation was found between the teachers stated attitude and their perception of the level of administrative support, $r = 0.397$, $p < 0.01$ (see Table 7). The one-way analysis of variance of level of administrative support (independent variable with three levels) on the dependent variable of stated attitude score, yielded a significant effect, F 2, 150 = 14.88, $p < 0.01$ (see Table 13). The Newman-Keuls multiple comparison test yielded a significant difference at the .01 level between the mean scores of levels 1 and 3, $Q = 6.56$, and at the .05 level between levels 1 and 2, $Q = 3.08$.

Figure 7 is a graphical presentation of the mean scores of the stated attitude for the three levels of administrative support.

Thus, for the total sample, the hypothesis of a significantly positive relation between the stated attitudes of regular classroom teachers toward teaching handicapped students in the regular classroom and the teachers' perception of the level of administrative support appears to be supported.

Observation Group

A significant relation was found between the teachers stated attitude and their perception of the level of administrative support, $r = 0.336$, $p < 0.05$ (see Table 8). The one-way analysis of

Hypothesis 8: There Will Be a Significant Positive Relation Between the Stated Attitude of the Regular Classroom Teachers toward Teaching Handicapped Students in the Regular Classroom and the Teachers' Perception of the Level of Administrative Support.

Total Sample

A significant positive relation was found between the teachers stated attitude and their perception of the level of administrative support, $r = 0.397$, $p < 0.01$ (see Table 7). The one-way analysis of variance of level of administrative support (independent variable with three levels) on the dependent variable of stated attitude score, yielded a significant effect, F 2, 150 = 14.88, $p < 0.01$ (see Table 13). The Newman-Keuls multiple comparison test yielded a significant difference at the .01 level between the mean scores of levels 1 and 3, $Q = 6.56$, and at the .05 level between levels 1 and 2, $Q = 3.08$.

Figure 7 is a graphical presentation of the mean scores of the stated attitude for the three levels of administrative support.

Thus, for the total sample, the hypothesis of a significantly positive relation between the stated attitudes of regular classroom teachers toward teaching handicapped students in the regular classroom and the teachers' perception of the level of administrative support appears to be supported.

Observation Group

A significant relation was found between the teachers stated attitude and their perception of the level of administrative support, $r = 0.336$, $p < 0.05$ (see Table 8). The one-way analysis of

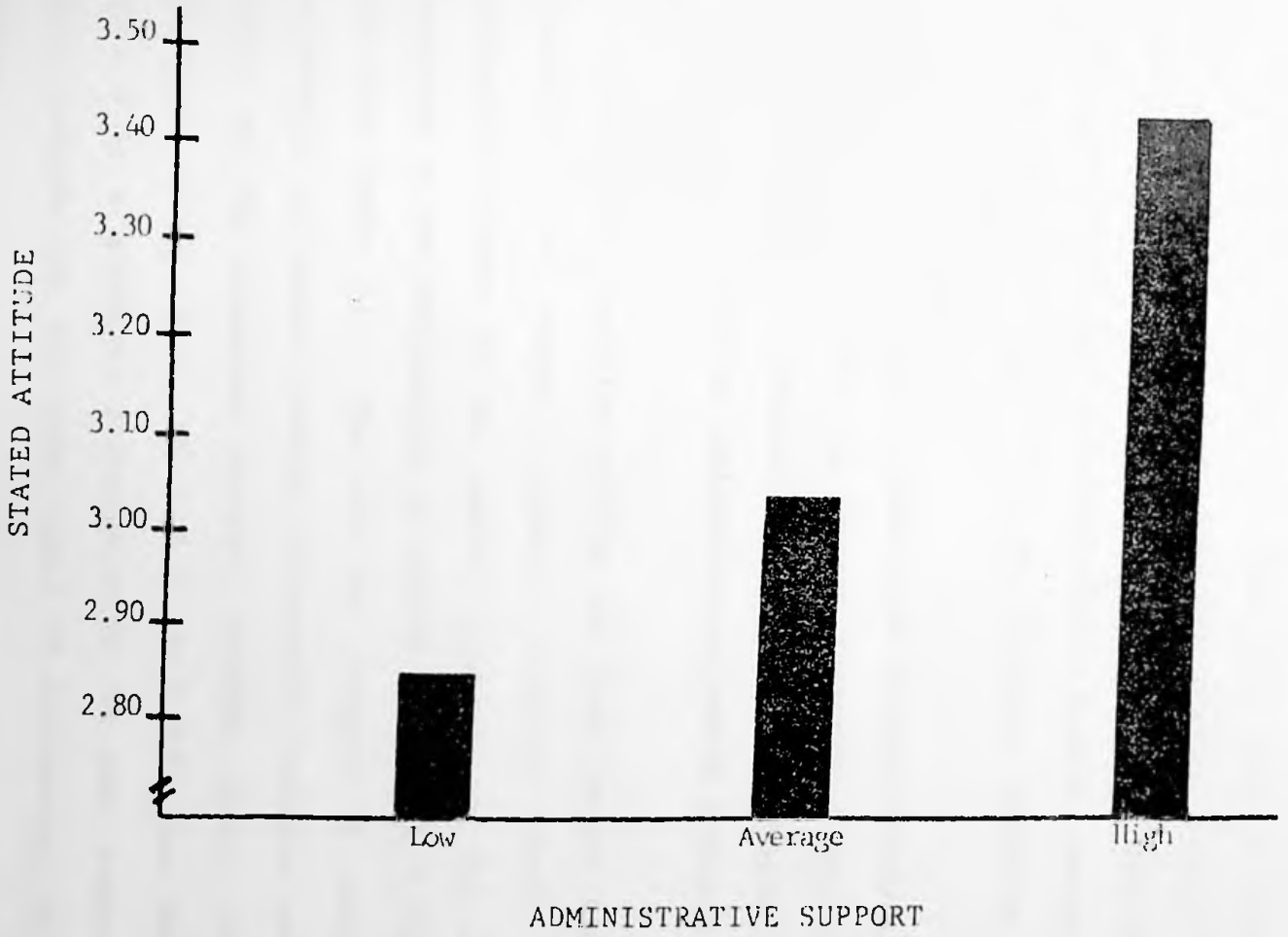

Figure 7 - Stated attitude mean scores of the total sample by perceived level of administrative support.

variance of level of administrative support (independent variable with three levels) on the dependent variable of stated attitude, yielded no significant effect, F 2, 33 = 2.36, $p > 0.05$ (see Table 14).

Thus, the hypothesis of a significant relation between the stated attitude of the regular classroom teachers toward teaching handicapped children in the regular classroom and the teachers' perception of the level of administrative support, appears to be supported by the total sample, and partially supported by the observation group.

Hypothesis 9: There Will Be a Significant Positive Relation between the Stated Attitude of the Regular Classroom Teachers Toward Teaching Handicapped Students in the Regular Classroom and the Teachers' Perception of the Availability of Support Services.

Total Sample

A significant positive relation was found between the stated attitude of the regular classroom teachers toward teaching handicapped students in the regular classroom and the teachers' perception of the availability of support service, $r = 0.288$, $p < 0.01$ (see Table 7). The one way analysis of variance of availability of support service (independent variable with three levels) on the dependent variable attitude score, yielded a significant effect, F 2, 156 = 7.20, $p < 0.01$ (see Table 13). Figure 8 is a graphical presentation of the mean scores of the stated attitude for the three levels of availability of support service.

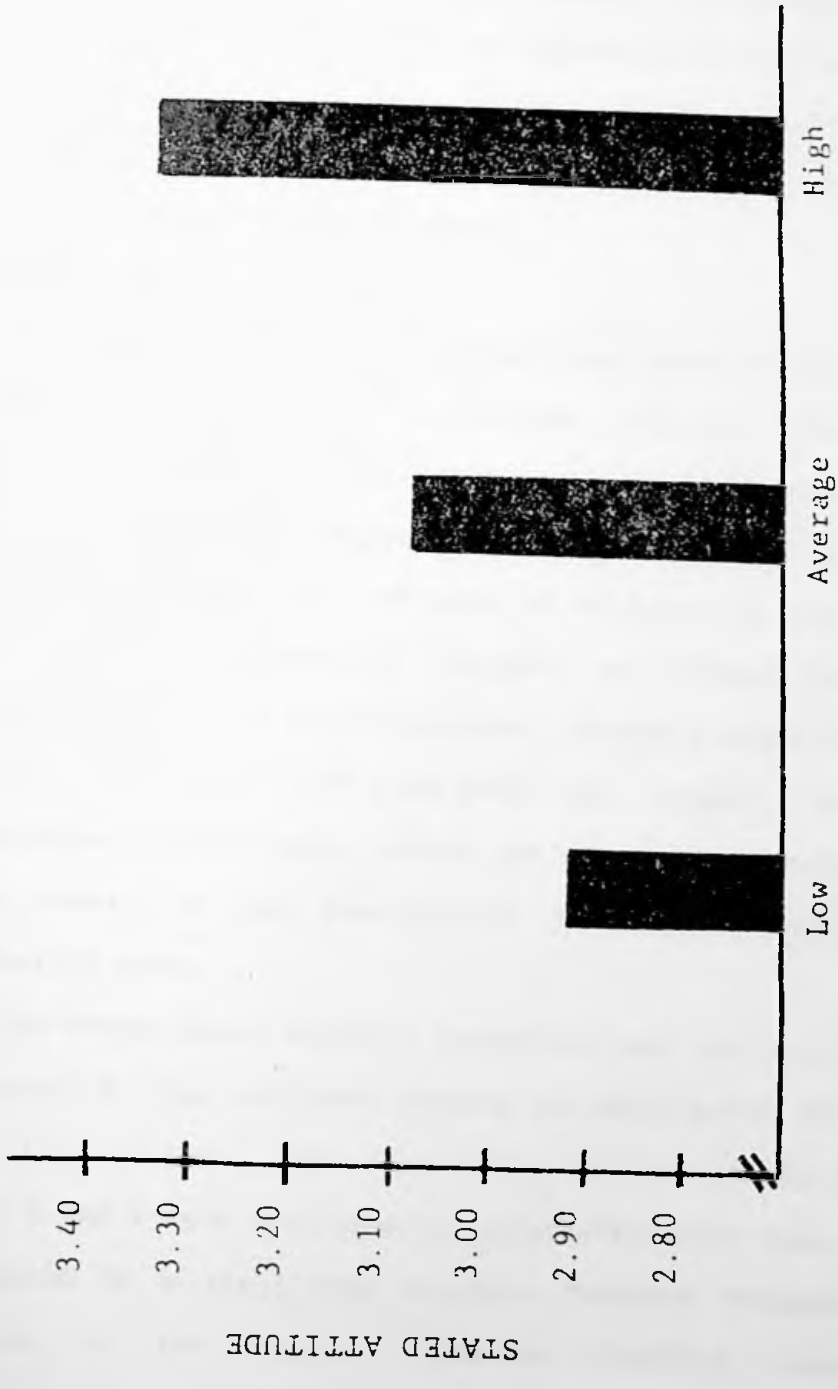

Figure 8 - Stated attitude mean scores of the total sample by perceived availability of support service.

The Newman-Keuls multiple comparison test yielded a significant difference at the .01 level between the mean scores of levels 1 and 3, Q = 6.80. No other significant difference between means was found. Thus, the hypothesis of a significant positive relation between the stated attitude of the regular classroom teachers toward teaching handicapped students in the regular classroom and the teachers' perception of the availability of support service appears to be supported by the total sample.

Observation Group

A significant positive relation was found between the stated attitude of the regular classroom teachers toward teaching handicapped students in the regular classroom and their perception of the availability of support services, $r = 0.448$, $p < 0.01$ (see Table 8). The one-way analysis of variance of availability of support service (independent variable with three levels) on the dependent variable of stated attitude, yielded a significant effect, F 2, 33 = 4.23, $p < 0.05$ (see Table 14). Figure 9 is a graphical presentation of the mean scores for the stated attitude for the three levels of the availability of support service for the observation group.

The Newman-Keuls multiple comparison test yielded a significant difference at the .05 level between the mean scores of level 1 and level 3, Q = 3.41. The mean scores between levels 1 and 2 and levels 2 and 3 were determined to be statistically equal. Thus, the hypothesis of a significant positive relation between the stated attitude of the regular classroom teachers toward teaching

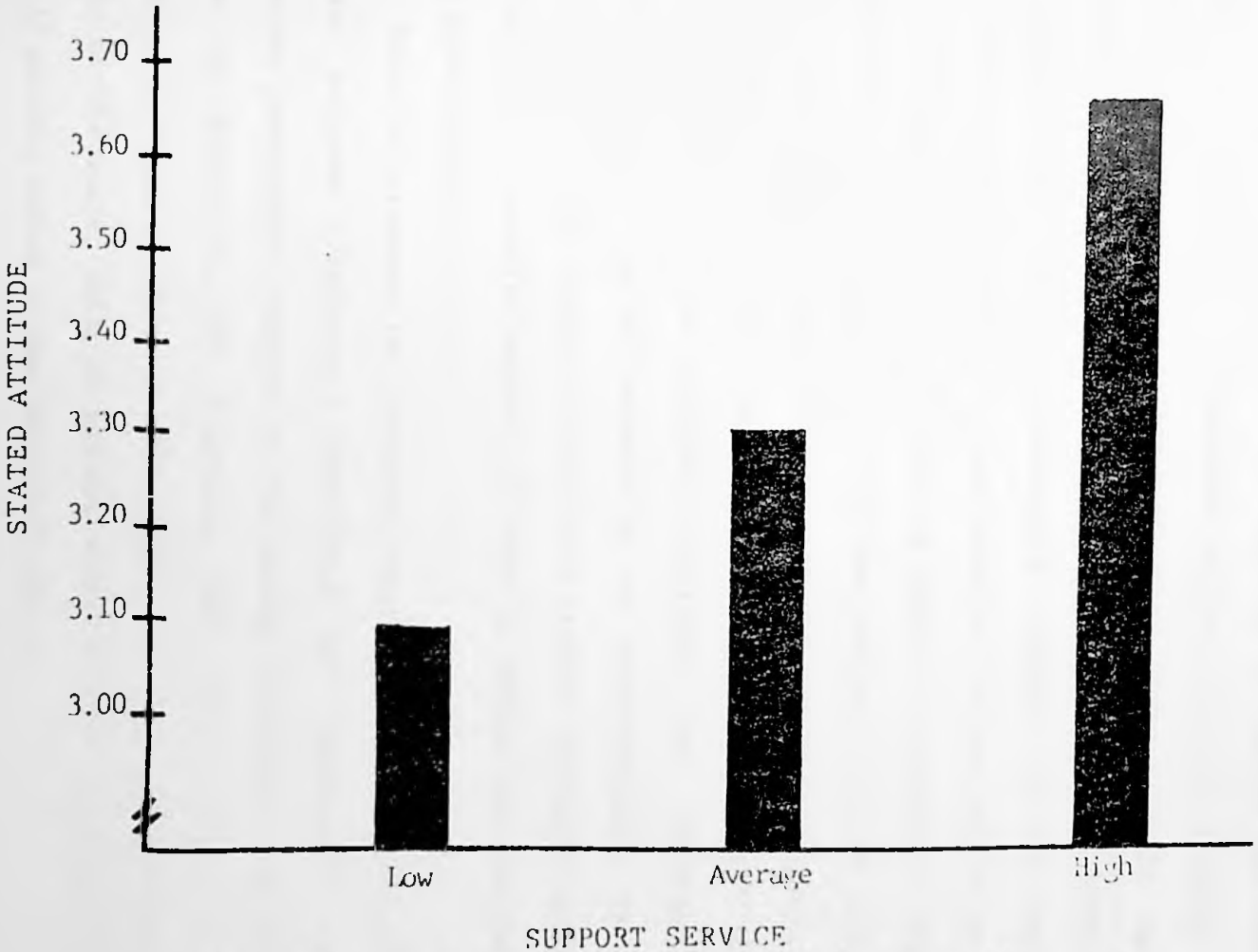

Figure 9 - Stated attitude mean scores of the observation group by perceived availability of support service.

handicapped students in the regular classroom and the teachers' perception of the availability of support service appears to be supported by the observation group as well as the total sample.

One of the purposes of this study was to measure the present attitude of elementary and secondary regular classroom teachers and student interns toward education handicapped students in the regular classroom. The overall stated attitude of the regular classroom teachers toward educating handicapped students in the regular classroom, as measured by the questionnaire, appears to be in the average range. Table 15 presents the number of responses, ranges, means, and standard deviations for the teachers' stated attitude toward educating handicapped students in the regular classroom. As can be seen in Table 15, the mean score for the teachers' stated attitude is 3.15, an undecided attitude (not "positive or negative") as defined and measured by the questionnaire. One can also note that the range is wide, with teacher attitudes going as low as 1.23, a strongly negative attitude as defined and measured by the questionnaire.

Table 16 presents the frequency distribution of the teachers' stated attitude ("negative," "positive," and "undecided") toward teaching handicapped students in the regular classroom. As can be seen in Table 16, 101 teachers, over half (54%) of the regular-classroom teachers in this study, scored in the "undecided" range of the scale, while 34 percent scored in the "positive" range and 12 percent scored in the "negative" range.

Table 15

Number of Responses, Ranges, Mean Scores, and Standard Deviations for the Teachers' Stated Attitude

	N	Range	Mean	S. D.
Total Elementary	88	1.23-4.20	3.10	0.64
Total Secondary	99	1.97-4.43	3.20	0.53
Total Sample Ele/Sec	187	1.23-4.43	3.15	0.59

Table 16

Frequency Distribution of Teachers' Positive, Negative, or Undecided Stated Attitude Toward Teaching Handicapped Students in the Regular Classroom

	Elementary		Secondary		Total	
Stated Attitude Score	n	%	n	%	n	%
1.00 - 2.50 ("negative")	16	(18%)	7	(7%)	23	(12%)
2.51 - 3.50 ("undecided")	43	(49%)	58	(66%)	101	(54%)
3.51 - 5.00 ("positive")	29	(33%)	34	(34%)	63	(34%)

Chapter V

Summary, Conclusions, and Recommendations

Summary

This study was undertaken to investigate the attitudes and acceptance behaviors of the regular-classroom teachers toward the present movement of educating handicapped children in the regular-classroom, to investigate selected variables that may affect these attitudes and acceptance behaviors, and to serve as a basis for future curriculum planning in the teacher education programs as well as for program development reference for local education agencies involved with the implementation of "mainstreaming." This study focused its attention on the attitudes and acceptance behaviors of the regular-classroom teachers because previous research had indicated that the success or failure of mainstreaming is in the hands of the regular-classroom teachers who are responsible for the education of the handicapped students placed in their classrooms (Haring, 1956; Jones et al., 1978; Larrivee et al., 1979; Yap, 1977).

The purposes of this study were:

1. To measure the present attitudes of elementary and secondary regular-classroom teachers and student interns toward educating handicapped students in their classrooms.
2. To identify any relation that may exist between the attitudes of the regular-classroom teachers and student interns toward educating handicapped students in their classrooms and the following variables: a) the number of hsndicapped students the teachers have taught, b) the type of school in which the

teachers are presently teaching, c) the year the teaching certificate was (or will be) received, d) the number of semester hours of course work in special education the teachers had taken, e) the grade level the teachers are presently teaching, f) the degree of success the teachers perceive thay have had teaching handicapped students, g) the teachers' perception of the level of administrative support relative to teaching handicapped students, h) the teachers' perception of the availability of support service relative to teaching handicapped students.

3. To test an observation instrument to determine its ability to objectively measure teachers' acceptance behavior toward handicapped children.

4. To investigate the validity of teachers' stated attitudes as evidenced by observation of the teachers' classroom acceptance behavior.

The observation instrument designed for use in this study was field-tested by the writer in six elementary classrooms and adapted in format and content. The adapted instrument was then field-tested in seven classrooms with one other trained observer to check for inter-observer reliability. Additionally, five inter-observer reliability checks were made throughout the data collection stage of this study.

The data were collected from the following sources: 1) the 149 regular-classroom teachers from the Allegany County Public Schools and the 38 student interns from Frostburg State College who

responded to the questionnaire, and 2) the 32 regular classroom teachers from the Allegany County Public Schools and the eight student interns from Frostburg State College that responded to the questionnaire and indicated that they were presently teaching handicapped students in their classrooms and would approve an observation of that student(s) in their chassroom during a normal interactive instructional activity. A total of 187 regular-classroom teachers and student interns responded to the questionnaire. Of this total, 88 were elementary regular-classroom teachers and 99 were secondary regular-classroom teachers. A total of 40 regular-classroom teachers and student-interns volunteered to be observed teaching handicapped students in their classrooms. Of this total, 20 were elementary regular-classroom teachers and 20 were secondary regular-classroom teachers.

To test the hypotheses of this study, correlations were calculated between 1) the stated attitude of the regular-classroom teachers of the total sample and each of the selected variables, 2) the stated attitude of regular-classroom teachers of the observation group and their observed acceptance bahavior, and 3) the stated attitude of the regular classroom teachers of the observation group and the selected variables.

One-way analyses of variance were then conducted between 1) each of the selected variables (as the independent variable) on the dependent variable of stated attitude for the total sample, 2) each of the observation scores (as the independent variable) on the dependent variable of stated attitude, and 3) each of the selected

variables (as the independent variable) on the dependent variable of stated attitude for the observation group. The Newman-Keuls multiple-comparison method was utilized to test all variables of three or more levels that yielded a significant effect on the one-way analyses of variance tests.

Conclusions

Based on the findings of this study, and recognizing the limitations of this study, the following conclusions are stated:

1. Accept the null hypothesis of no significant relation between the teachers' stated attitude toward teaching handicapped students and the number of handicapped students the teachers have taught.
2. Accept the null hypothesis of no significant relation between the stated attitude of the regular-classroom teachers toward teaching handicapped students in the regular classroom and the type of school in which they presently teach.
3. Reject the null hypothesis of no significant relation between the stated attitude of the regular-classroom teachers toward teaching handicapped students in the regular classroom and the year the teachers received their teaching certification.
4. Accept the null hypothesis of no significant relation between the stated attitude of the regular classroom teachers toward teaching handicapped students in the regular classroom and the number of semester hours of special

education the teachers have taught.

5. Accept the null hypothesis of no significant relation between the teachers' stated attitude toward teaching handicapped students in the regular classroom and the teachers' observed acceptance behavior.
6. Reject the hypothesis that elementary regular-classroom teachers will have a significantly more positive stated attitude toward teaching handicapped students in the regular classroom than will secondary regular-classroom teachers.
7. Accept the hypothesis that there will be a significant positive relation between the stated attitude of regular classroom teachers toward teaching handicapped students in the regular classroom and the degree of success they perceive they have had teaching handicapped students.
8. Accept the hypothesis of a significant positive relation between the stated attitude of the regular-classroom teachers toward teaching handicapped students in the regular classroom and the teachers' perception of the level of administrative support.
9. Accept the hypothesis of a significant positive relation between the teachers' stated attitude toward teaching handicapped students in the regular classroom and their perception of the availability of support service.

Discussion

The findings of this study have shown that the number of handicapped students that the teachers have taught does not

positively or negatively influence the teachers' stated attitude toward teaching handicapped students in the classroom. This researcher had originally reasoned that the more handicapped students the teachers had taught, the more positive the teachers' attitudes would become. That the findings do not support this may suggest that programs that are designed to provide teachers with more exposure to handicapped students, such as Dailey et al. (1981) suggest, may not be sufficient to influence a more positive attitude among the teachers.

The study has shown that there is no significant relatio. between the teachers' stated attitude and the type of school in which the teachers are presently teaching. This researcher had originally reasoned that the teachers teaching in schools that had resource room teachers present all day (i. e., full-day resource room and special wing) and, perhaps, had been exposed to the presence of special facilities needed for various handicapping conditions (i. e., special-wing schools) would have more positive attitudes. That the findings do not support this idea may be attributed to the fact that the resource-room teachers have full-day teaching schedules which limit the interaction between regular-classroom teachers and the resuorce-room teachers and the amount of special assistance that is available. This finding may have relevance to the teacher-load planning process that takes place yearly in the public schools.

This study found that there was a significant positive relation for the total sample between the teachers' stated attitude and the

year the teachers received their certification. This suggests that the teachers certified after 1975 and after the passage of Public Law 94-142 have a significantly more positive stated attitude than the teachers certified prior to 1975. This may be an indication that the competencies necessary to teach handicapped students in the regular classroom, which are now mandated by national and state teacher education accreditating agencies to be infused into approved teacher education programs, have facilitated a more positive stated attitude. The concern expressed by Browder (1983) that teachers certified prior to 1975 lack this necessary training, appears to be supported by the findings of this study.

The findings of this study indicated no support of a significant relation between the stated attitude of the regular-classroom teachers toward educating handicapped students in the regular classroom and the number of semester hours of special education the teachers had taken. The writer had originally reasoned that the teachers' attitudes world be significantly more positive as the number of semester hours of special education course work they had taken increased. This finding may be an indication that the present trend, as reported by Dailey et al. (1981), of many states requiring course work in special education for all teachers applying or reapplying for certification, should be reconsidered, or at least the content of those courses re-examined.

Why there is no significant relation cannot be addressed by the findings of this study. However, the author believes this to be an important question. The author would suggest that some possible

explanations may be found by investigating the skills necessary to teach handicapped students in the regular classroom and then comparing those skills to the skills being taught in the current special education courses. It is possible that current special education courses have been developed to prepare teachers to teach in the special classroom. These skills may not be as appropriate for the regular-classroom teacher who may be teaching different types of handicapped students in a different environment. It is also possible that the individual regular-classroom teacher maintains a constant attitude toward teaching the handicapped because he/she has never made the commitment to such teaching and has consequently not changed attitude through the aquisition of special education teaching skills.

There is no evidence to support any significant relationship between the teachers' stated attitude toward educating handicapped students in the regular classroom and their observed acceptance behavior for the interaction score, environmental adaptation score, and the combined score. The data indicate that in actual practice, the large majority of regular-classroom teachers are attending to the needs of the handicapped students. This would appear to indicate that stated attitude alone does not present a totally accurate picture of what is happening in the classrooms concerning the level of acceptance the handicapped children are receiving. In addition to questionnaire-based data, observations appear to be a necessary part of investigation. In this study, stated attitude on these three variables appears to explain how the teachers feel

toward the concept, not how they respond to the handicapped. Within the limits of this study, such data may place into question, in regard to specific variables, the basic premise that attitude directly affects how one behaves. On the other hand, one can also consider the fact that the observation group consisted of volunteers who agreed to an observation and who knew when the observer was coming. This group, therefore, may not have been representative of the total sample and/or may have behaved in a different manner than usual because of the presence of the observer.

Also, during the observations, the author noted that the type and severity of the students' handicapping conditions seemed to influence the environmental adaptation scoring. Many handicapped students did not require environmental adaptations; therefore, the observation form was marked positive in this area (i. e., the students environmental needs were being met). In cases where students did have environmental needs (e. g., being seated so that the student's better ear would be toward the teacher) and such needs were not being met, the observation form was marked negative. Therefore, the type and severity of the handicap was a major factor in the teacher's score on environmental adaptation. In every case where a negative response was recorded for the environmental adaptation category, a follow-up question was directed to the teacher. This question concerned the student's environmental needs (e. g., "With which ear does John hear better?"). In each case, the teachers were not aware of the environmental needs of their

students. This may indicate that support service to some teachers was limited. However, there were observations in which students requiring environmental adaptations were receiving such adaptations. Talking with teachers after these observations revealed that the teachers had sought information on their own or that the student's needs had been explained by the principal, the parent, or the special education teacher. This may suggest that teachers will provide environmental adaptations for their handicapped students if they are made aware of those needs. Perhaps, then, providing the teachers with this type of information would be a most effective form of inservice training and support service delivery. The observation instrument designed for use in this study, though designed for research and tested solely for that purpose, appears to be an instrument that could be used as an aid in providing constructive feedback to the teachers. If utilized by an individual who had access to all background information concerning the students, adding an additional category concerning needed adaptations in the instruction would appear to be helpful.

The findings of this study indicated no support for the hypothesis that the elementary regular-classroom teachers would have significantly more positive attitudes toward educating handicapped students in the regular classroom than the secondary regular-classroom teachers. This finding was contrary to the finding of Larrivee et al. (1979). Two areas that did show a significant difference between those grade levels, however, were 1) the perceived availability of support service and 2) interaction

observation scores. The mean scores for these two areas show that the elementary teachers scored higher in both. School and class organization may be a factor to consider in relation to these findings. Elementary teachers are responsible for fewer numbers of students compared to the secondary regular-classroom teachers. Likewise, the elementary teachers spend the full day predominantly with the same students, whereas the secondary teachers teach a different class each hour.

This study found that there is support for the hypothesis that predicted a significant relation between the stated attitude of the regular-classroom teachers and their perceived degree of success in teaching handicapped students. This was likewise the finding of Larrivee et al. (1979). This would suggest that, as expected, an important component of teacher training would be to provide opportunities for teachers to experience success in teaching handicapped students. This may be a missing component in current teacher training. Findings mentioned earlier (i. e., 1. no support for the number of handicapped taught and the teachers' stated attitude, 2. no support for the type of school in which the teachers are located and their stated attitudes, and 3. no support for the number of semester hours of special education course work and the teachers' stated attitudes) should be considered with this finding in mind.

Checking the relation between the perceived degree of success and the year of certification (for the total sample), indicates that there is a significant positive relation. This seems to indicate

that the training that the teachers have received since 1975 has facilitated a higher perceived degree of success. This same finding is not true for the observation group, however.

The provision of appropriate support service is indicated as an important consideration in helping teachers experience what they consider to be success in teaching handicapped students. A significant positive relation was found between the availability of support service, as rated by the teachers, and the degree of perceived success for both the total sample and the observation group. The strongest relation, however, was demonstrated between the level of administrative support, as rated by the teachers, and the degree of perceived success in teaching handicapped students both for the total sample and the observation group.

This study found that the data from the total sample and the observation group support a significant positive relation between the stated attitude of the regular-classroom teachers and the level of administrative support. This was, likewise, the finding of Larrivee et al. (1979). These findings indicate that an important component in the training of administrators would be the development of the understanding of the importance of the provision of needed support and the delivery systems necessary for that support.

This study found that the data from the total sample and the observation group supported a significant relation between the stated attitude of the regular-classroom teachers and the availability of support service. This, likewise, was the finding of Larrivee et al. (1979). The importance of support service to the

degree of success that the teachers perceive they have had teaching handicapped students in the regular classroom was stated earlier in this paper. These findings suggest that methods of providing teachers with necessary support in teaching handicapped students are worthy of careful consideration. As was mentioned earlier, the special educators in the schools are sources of potential help for the regular-classroom teachers; however, their teaching schedules limit and in some cases prohibit their assistance to the regular-classroom teachers. Additionally, it would appear that the administrators set the tone of the school in relation to the attitudes of the teachers toward educating handicapped students in the regular classroom. The research reported earlier (Haring, 1956; Larrivee et al., 1979; Yap, 1977) indicating that the classroom teachers are more responsible for the success or failure of "mainstreaming" than any other group, appears to be in need of being considered with this finding in mind. This is particularly true on the secondary level. The finding that secondary regular-classroom teachers perceive a lower availability of support services than the elementary regular-classroom teachers, lends support to this idea. The informal finding, reported earlier, that some of the teachers were not aware of the environmental needs of the handicapped students in their classrooms, lends support to the idea that some teachers are not being provided with support services. Thus, careful consideration to programs that would facilitate the needed support service to the teachers, appears necessary.

Recommendations

1. It is recommended that teacher training programs focus on providing opportunities for teachers to experience success in teaching handicapped students, perhaps in such a format as micro-teaching.

2. It is recommended that teacher training course work include a focus on the development of positive attitudes in teaching handicapped students in the regular classroom.

3. It is recommended that course work in special education provided for regular-classroom teachers focus on topics relevant to such teaching in the regular classroom.

4. It is recommended that inservice training be provided in the regular classroom focusing on special needs in that classroom.

5. It is recommended that resource-room teachers be utilized, at least to some extent, to provide support services to the regular-classroom teacher.

6. It is recommended that inservice training be provided to administrators to develop their understanding of the types and importance of support service and administrative support, as well as the types of delivery systems for such service and support, that should be provided for the regular-classroom teachers.

7. It is recommended that further studies be conducted to determine the nature of experiences that regular-classroom teachers need in order to help facilitate a more positive attitude toward teaching handicapped students in the regular classroom.

8. It is recommended that further studies be conducted to examine possible school and classroom schedules that would facilitate support service provision to regular-classroom teachers via the special educators in the schools.

9. It is recommended that further studies be conducted to examine effective inservice training progams for early-certified teachers.

10. It is recommended that further research be conducted to investigate the skills necessary for regular classroom teachers to effectively teach handicapped students in the regular classroom.

11. It is recommended that further research be conducted to investigate the effectiveness of current special education course work for regular classroom teachers.

12. It is recommended that further research be conducted to investigate why there is no relation between special education course work and the stated attitude of regular classroom teachers toward educating handicapped students in the regular classroom.

13. It is recommended that future research directed at the effectiveness of mainstreaming include direct observation methods.

14. It is recommended that further research be directed to the relation between the teachers' stated attitudes and observed acceptance behavior.

15. It is recommended that the observation instrument designed for this study be tested for its ability to report accurate observational data for the purpose of offering support service and inservice training to the regular-classroom teachers.

16. It is recommended that an additional category (i. e., needed

adaptations in the instruction) be added to the observation instrument and tested for usefulness.

17. It is recommended that further research be conducted to investigate why elementary regular-classroom teachers perceive a higher availability of support service than the secondary regular-classroom teachers.

18. It is recommended that further studies be conducted to investigate why elementary regular classroom teachers appear to interact more positively with handicapped students than secondary regular classroom teachers.

19. It is recommended that further studies be conducted to identify effective support service delivery systems for the secondary regular-classroom teachers.

20. It is recommended that further studies be conducted to examine the relation between the degree of success that the teachers perceive they have had teaching handicapped students and their stated attitude and acceptance behaviors.

21. It is recommended that further studies be conducted to determine experiences that will provide teachers with opportunities to experience success teaching handicapped students in the regular classroom.

22. It is recommended that further research be conducted to determine the types of administrative support the regular-classroom teachers are in need of relative to teaching handicapped students in the regular classroom.

23. It is recommended that further studies be conducted to

investigate delivery systems of administrative support to regular classroom teachers involved with educating handicapped students.

24. It is recommended that further research be conducted to determine the kinds of support services that the teachers are in need of relative to teaching handicapped students in the regular classroom.

All of the above recommendations deal with taking action to increase the attitude of the regular-classroom teacher in a positive direction. The finding that the teachers hold an undecided (not positive or negative) attitude, overall, toward educating handicapped students in the regular classroom may indicate that the teachers are still collecting data via their experiences as to the appropriateness of "mainstreaming." This would indicate that the experiences that the teachers have with handicapped students in the regular classroom will influence their attitude in either a positive or negative way. As was discussed earlier in this paper, the degree of success that the teachers perceive they have had teaching handicapped students is positively related to their stated attitude. This would indicate, then, that teacher training programs should include in their curricula definite objectives and activities that would be designed to develop positive attitudes toward mainstreaming. This study has shown that those who perceive that they have experienced success with teaching handicapped students in the regular classroom, and those who perceive that they have a high degree of support services and administrative support had a significantly more positive attitude toward teaching handicapped

students in the regular classroom. According to the literature, teacher attitudes definitely affect the success of students in the classroom. If the beliefs held in this country, as reflected in Public Law 94-142, are to be held true and implemented, teacher education programs and our school systems must consciously seek to help the regular-classroom teacher develop positive attitudes toward teaching handicapped students.

References

Adelson, E., & Fraiberg, S. Gross motor development in infants blind from birth. In B. Z. Freidlander, G. M. Sterritt, and G. E. Kirk (Eds.), Exceptional infant, Vol. 3: Assessment and Intervention. New York: Brunner/Mazel, 1975.

Appell, M. Infant stimulation programming for the deaf-blind. In E. L. Lowell and C. C. Rouin (Eds.), State of the art. Sacramento: California State Department of Education, 1977.

Ashley, J. Mainstreaming: one step forward, two steps back. In Educating exceptional children, Sluice Dock, Connecticut: Dushkin Publishing, 1979. (Originally published: American Educator, October, 1977.)

Behling, H. Effective Schools and effective classrooms. Unpublished manuscript, Maryland State Department of Education Library and Resource Center, 1981.

Beihler, R., & Snowman, J. Psychology applied to teaching. (4th ed.) Boston: Houghton Mifflin, 1982.

Blackhurst, E. & Berdine, W. An introduction to special education. Little, Brown, 1981.

Bloom, B. Stability and change in human characteristics. New York: Wiley, 1964.

Borg, W., & Ascione, F. Classroom management in elementary mainstreaming classrooms. Journal of Educational Psychology, 1982, **74**, 85-89.

Brooks, B., & Bransford, L. Modifications of teachers' attitudes toward mainstreaming. Exceptional Children, 1971, **38**, 259-260.

Brophy, J., & Good, T. Teacher-student relationships: Causes and consequences. New York: Holt, Rinehart & Winston, 1974.

Brophy, J. Teacher behavior and its effects. Journal of Teacher Education, 1979, 71, 733-750.

Browder, D. Guidlines for inservice planning. Exceptional Children, 1983, 49, 300-305.

Clairborn, W. Expectancy effects in the classroom: A failure to replicate. Journal of Educational Psychology, 1969, 60, 377-383.

Combs, R., & Harper, J. Effects of labels on attitudes of educators toward handicapped children. Exceptional Children, 1967, 33, 399-403.

Cooper, H. Pygmalion grows up: A model for teacher expectation communication and performance influence. Review of Educational Research, 1979, 49, 389-410.

Council for Exceptional Children. Delegate Assembly Policy Statement. Reston, Virginia, 1976.

Dailey, J., & Halpin, G. Modifying undergraduate attitudes toward the handicapped by videotapes. The Journal of Special Education, 1981, 15, 333-339.

Dworkin, N. Changing teachers' negative expectations. Academic Therapy, 1979, 14, 517-531.

Foster, G., Ysseldyke, J., & Reese,J. I wouldn't have seen it if I hadn't believed it. Exceptional Children, 1975, 41, 469-473.

Good, T. Teacher expectations and student perceptions: A decade of research. Educational Leadership, 1981, 5, 415-421.

Good, T., & Brophy, J. Looking in classrooms. (2nd ed.) New York:

Harper and Row, 1978.

Good, T., & Brophy, J. Educational psychology: A realistic approach. (2nd ed.) New York: Holt, Rinehart, and Winston, 1980.

Haggarty, A. The effects of long term hospitalization or institutionalization upon language development of children..Journal of Genetic Psychology, 1959, **94**, 205-209.

Haring, N. A study of attitudes of classroom teachers toward exceptional children. (Doctoral dissertations, University of Nebraska) Ann Arbor, Michigan: University Microfilms, 1956, No. 19378.

Henerson, M., Morris, L. & Fitz-Gibbon, C. How to measure attitudes. Beverly Hills: Sage, 1982.

Horton, K. Early intervention for hearing impaired infants and young children. In T. I. Tjossem (Ed.), Intervention strategies for high risk infants and young children. Baltimore: University Park Press, 1976.

Jones, L., Gottlieb, J., Guskin, S., & Yashida, R. Evaluating mainstreaming programs: Models, caveats, considerations, and guidlines. Exceptional Children, 1978, **44**, 588-600.

Kirk, S., & Gallagher, J. Educating exceptional children. Boston: Houghton Mifflin, 1979.

Lane, H. The wild boy of Aveyron. Cambridge: Harvard University Press, 1976.

Larrivee, B., & Cook, L. Mainstreaming: A study of the variables affecting teacher attitudes. Journal of Special Education, 1979, **13**, 315-324.

Larrivee, B. Effect of inservice training intensity on teachers' attitudes toward mainstreaming. Exceptional Children, 1981, 48, 34-39.

Larrivee, B. Factors underlying regular classroom teachers' attitude toward mainstreaming. Psychology in the schools, 1982, 19, 374-379.

Lebank v. Spears, 60 F. R. D. 135 (La. 1973).

Lippman, I. Attitudes toward the handicapped. Charles C. Thomas, 1972.

Lombardi, T. P., Meadowcraft, P., & Strausburger, R. Modifying teacher trainers' attitudes towards and knowledge of mainstreaming handicapped students. Exceptional Children, 1982, 48, 544-546.

Major, I. How do we accept the handicapped? Elementary School Journal, 1967, 61, 328-330.

Martin, E. Some thoughts on mainstreaming. Exceptional Children, 1974, 41, 68-71.

Maryland State Department of Education. Requirements for certificates for administrators, supervisors, and teachers, Baltimore, MD, 1982.

Mills v. Board of Education of District of Columbia, 348 F. Supp. 886 (D. C. 1972).

Mitchell, M. Teacher attitudes. High School Journal, 1976, 59, 302-312.

National Association of State Directors of Teacher Education and Certification (NASDTEC). Standards for state approval of teacher

education. (7th Ed.), 1981.

National Council for Accreditation of Teacher Education (NCATE). Standards for accreditation of teacher educaiton. Washington, D. C., 1982.

Nazzaro, J. Exceptional timetables: Historic events affecting the handicapped and gifted. Reston: Council for Exceptional Children, 1977.

Pennsylvania Associaton of Retarded Children v. Commonwealth of Pennsylvania, 343 F. Supp. 279 (Pa. 1972).

Purkey, W. Inviting school success. Belmont: Wadsworth Publishing, 1978.

Raber, W., & Weisz, J. Teachers feedback to mentally retarded and nonretarded children. American Journal of Mental Deficiency, 1981, 86, 148-156.

Remmer, H. Introduction to opinion and attitude measurement. Westport: Greenwood Press, 1972.

Rose, T., & Gottlieb, J. Transfer of training: An overlooked component of mainstreaming programs. Exceptional Children, 1981, 48 175-177.

Rosenthal, R., & Jacobson, L. Pygmalion in the classroom: Teacher expectation and pupil's intellectual development. New York: Holt, Rinehart and Winston, 1968.

Rosenthal, R. & Jacobson, L. Teacher expectations for the disadvantaged. In A. M. Eastman (ed.), The norton reader (4th ed.) New York: W. W. Norton, 1977. (originally published: Scientific American, 218, 1968).

Saltz, R. Effects of part-time "mothering" on I. Q. and I. Q. of young institutionalized children. Child Development, 1973, 9, 166-170.

Scherzer, A. Early diagnosis, management, and treatment of cerebral palsy. Rehabilitation Literature, 1974, 35, 194-199.

Shavelson, R. Statistical reasoning for the behavioral sciences, Boston: Allyn and Bacon, 1981.

Skeels, H., & Dye, H. A study of the effects of differential stimulation on mentally retarded children. Proceedings and Addresses of the Annual Session - American Association on Mental Deficiency, 1939, 44, 114-136. (Psychological Abstracts, 1940, 14, No. 1422.)

Snow, R. Unfinished pygmalion. contemporary Psychology, 1969, 14, 197-199.

Spitz, R. Hospitalism: an inquiry into the genesis of psychiatric conditions in early childhood. Psychoanalytic Study of the Child, 1945, 1, 53-74.

Spitz, R., & Wolf, R. Analytic depression. Psychoanalytic Study of the Child, 1946, 2, 313-342.

Weintraub, F. Editorial comment, In A. Abeson, and J. Zettel, The Education for All Handicapped Children Act of 1975. Exceptional Children, 1977, 44, 114-128.

Wheatley, W., Shuster, I. & Schilit, J. Special education teacher training: A comparative profile. Exceptional Children, 1983, 49, 316-320.

Williams, R., & Algozzine, B. Teachers' attitudes toward mainstreaming. Elementary School Journal, 1979, 80, 63-67.

Yap, K. Teachers' education and teachers' attitudes toward children and learning. Elementary School Journal, 1977, 3, 38-43.

Appendix A

Correspondence

320 Sunset Drive
Cumberland, Maryland 21502
January 3, 1983

Dear

I wish to ask you for your assistance in the research I am currently conducting for my doctoral dissertation at West Virginia University. Your help is key to my study.

The study deals with the opinions of regular-classroom teachers toward the present movement to mainstream handicapped students. It is hoped that possible directions for curriculum planning in teacher education programs will be forth coming from this study.

The study sample includes 30% of all elementary and secondary regular-classroom teachers in the Allegany County Public Schools, and all elementary and secondary student-interns (spring semester) from Frostburg State College.

I have received permission to ask for the help of the public school teachers and student-interns from Mr. Joseph Pellerzi, Assistant Superintendent of Instruction for the Allegany County Public Schools, and Dr. Norman Nightingale, Director of Field Experiences, Frostburg State College.

I am enclosing with this letter the survey which I am requesting you to complete. The survey contains 3 sections. An explanation of each section follows.

Section I - Section I lists eight background variables. I am asking you to circle your response to six of the variables, and to fill in the blanks for two variables.

Section II - Section II consists of thirty opinion statements. I am requesting that you indicate the degree of your agreement/disagreement with each statement, using a five-point scale consisting of the following: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD). There are no right or wrong answers to these statements. The best answers are those that honestly reflect your opinions.

Section III - Section III is a request for your permission to have me into your classroom for a one-hour observation of a mainstreamed student(s). This section is applicable to you only if you are presently teaching a mainstreamed student(s).

If you are presently teaching a mainstreamed student(s), and are willing to have me observe this student(s) in your classroom, you are asked to provide your name and telephone number so that I may contact you to schedule an appropriate time for such observation.

If you are not presently teaching a mainstreamed student(s), you should not complete Section III.

If you are presently teaching a mainstreamed student(s), but are not willing to have me conduct a one-hour observation of that student(s) in your classroom, you should not complete Section III.

Please be assured that your response to the survey will be held in complete confidence. This same confidentiality will be maintained during the observational part of the study. Additionally, be assured that you are free to withdraw your participation in this study at any time.

It will mean a great deal to me, and perhaps to teacher education programs if you will assist me in this research by completing the enclosed survey. Will you please take some time (approximately ten minutes) to think about and complete the enclosed survey, and mail it to me in the enclosed, stamped, addressed envelope?

Thank you in advance for your time and effort.

Sincerely,

Alice C. Alexander
Doctoral Candidate
West Virginia University
(301) 689-4374 (office)
(301) 724-8789 (home)

320 Sunset Drive
Cumberland, Maryland 21502
January 30, 1983

Recently, I requested your assistance in my doctoral dissertation study by asking you to complete a questionnaire concerning special needs students and returning it to me in the envelope provided. If you have not yet returned the questionnaire, will you please take some time (approximately 10 minutes) to complete the questionnaire and return it to me? Also, will you give strong consideration to my request for a one-hour observation of a special needs student(s) in your classroom? Your response means a great deal to the success of my study. If you have questions concerning the questionnaire or need of an additional questionnaire, please contact me by telephone at either number listed below.

Be assured that your response to the questionnaire will be held in confidence. If you volunteer for the classroom observation section of the study, be assured that confidentiality will be maintained. Additionally, you are free to withdraw your participation at any time.

If you have already returned the questionnaire, I thank you for taking your time to assist me. If you indicated that you would permit me to observe in your classroom, I will contact you in February to schedule an appropriate time for the observation.

Thank you for your consideration.

Sincerely,

Alice C. Alexander
Doctoral Candidate
West Virginia University

ACA:lm

Home: 724-8789
Office: 689-4374

The Institutional Review Board for
the Protection of Human Subjects
304 293-5270

307 Purinton House
Morgantown, West Virginia
26506

December 6, 1982

West Virginia
University

M E M O R A N D U M

TO: Alice C. Alexander

FROM: John T. Childress, Secretary for the Board

RE: H.S.# 1005.0 - "Regular-Classroom Teachers' Attitudes Toward Mainstreaming Handicapped Students: A Study of the Stated Attitudes and Their Relation to Selected Variables and Acceptance Behaviors"

The Institutional Review Board for the Protection of Human Subjects has reviewed and approved your Application for Exemption for your above-captioned research project.

This exemption will remain in effect on the condition that the research is carried out exactly as described in the application.

Best wishes for the success of your research.

JTC/mjt

Rhode Island College
Providence, Rhode Island 02908
Established 1854

Department of Special Education

January 12, 1983

Alice C. Alexander
320 Sunset Drive
Cumberland, MD 21502

Dear Ms. Alexander:

Permission is granted for use of the Mainstreaming Attitude Survey for your study. I would appreciate receiving your results upon completion.

You may also want to look at the recent article in Psychology in the Schools, Vol. 19, No. 3, July, 1982 (pp. 374-379).

Sincerely yours,

Barbara Larrivee

Barbara Larrivee, Ed.D.
Assistant Professor

ad

BOARD OF EDUCATION OF ALLEGANY COUNTY

108 WASHINGTON STREET • P. O. BOX 1008 CUMBERLAND, MARYLAND 21502

TELEPHONE (301) 759-2042

H. WILLIAM MITCHELL
SUPERINTENDENT

December 2, 1982

Mrs. Alice Alexander
3[illegible] Sunset Drive
Cumberland, Maryland 21502

Dear Mrs. Alexander:

You are hereby given permission to conduct your doctoral study entitled "Regular-Classroom Teachers' Attitudes Toward Mainstreaming Handicapped Students: A Study of the Stated Attitudes and Their Relation to Selected Variables and Acceptance Behaviors," in the Allegany County Public Schools beginning in January, 1983, according to the description within your approved prospectus.

Please note that all participation must be strictly voluntary.

Best wishes for a successful, fruitful study.

Joseph H. Pellerzi
Assistant Superintendent-Instruction

JHP:brk

Office of Field Experiences
Frostburg State College
Frostburg, Maryland
21532

December 3, 1982

Mrs. Alice Alexander
320 Sunset Drive
Cumberland, MD 21502

Dear Mrs. Alexander:

Please be advised that I grant permission for you to request the participation of the Frostburg State College student interns (spring semester) in your doctoral dissertation study entitled, "Regular Classroom Teachers' Attitudes Toward Mainstreaming Handicapped Students: A Study of the Stated Attitudes and Their Relation to Selected Variables and Acceptance Behaviors."

Sincerely,

Norman W. Nightingale

Norman W. Nightingale,
Coordinator of Field Experiences

NWN:lkb

cc: Dr. Root

Appendix B

Questionnaire Instrument

SURVEY QUESTIONNAIRE

A SURVEY OF TEACHER'S OPINIONS RELATIVE TO MAINSTREAMING SPECIAL NEEDS CHILDREN

Legislation requires that children with special needs be integrated into the regular classroom to the extent that such integration is possible. Educators have long realized that one of the most important influences on a child's educational progress is the classroom teacher. The purpose of this questionnaire is to obtain information to aid in planning teacher education programs.

For the purpose of this study, a "special-needs student" is defined as: "A handicapped student who is identified as needing special education and/or related services, and is being educated to the maximum extent possible in the regular-classroom under the direction of an Individualized Education Program developed by the appropriate school officials and parents."

SECTION I: Background Variables

Please circle your response to the following items, or fill in the provided blank.

1. Grade level you are presently teaching.	K-3	4-6	7-8	9-12	
2. Number of handicapped students you have taught.	0-3	4-7	8-12	13+	
3. Degree of success you have had teaching handicapped students.	Very High	High	Average	Low	Very Low
4. Level of administrative support you have received relative to teaching handicapped students.	Very High	High	Average	Low	Very Low
5. Availability of support services to you as an aid in teaching handicapped students (e.g. special education consultants, counselors, resource teachers, etc.)	Very High	High	Average	Low	Very Low
6. Type of school in which you are currently teaching.	Special Wing	Full-Day Resource Room	Half-Day Resource Room		

7. The year you received (will receive) your teaching certificate_____.

8. Number of semester hours of course work you have had in special education_____.

SECTION II: Teacher Opinions.

Please circle the number under the column that best describes your agreement or disagreement with the following statements. There are no correct answers; the best answers are those that honestly reflect your feelings.

Scale: SA = Strongly Agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly Disagree

		SA	A	U	D	SD
		5	4	3	2	1
1.	Many of the things teachers do with regular students in a classroom are appropriate for special-needs students.					
2.	The needs of handicapped students can best be served through special, separate classes.	5	4	3	2	1
3.	A special-needs child's classroom behavior generally requires more patience from the teacher than does the behavior of a normal child.	5	4	3	2	1
4.	The challenge of being in a regular classroom will promote the academic growth of the special-needs child.	5	4	3	2	1
5.	The extra attention special-needs students require will be to the detriment of the other students.	5	4	3	2	1
6.	Mainstreaming offers mixed group interaction which will foster understanding and acceptance of differences.	5	4	3	2	1
7.	It is difficult to maintain order in a regular classroom that contains a special-needs child.	5	4	3	2	1
8.	Regular teachers possess a great deal of the expertise necessary to work with special-needs students.	5	4	3	2	1
9.	The behavior of special-needs students will set a bad example for the other students.	5	4	3	2	1
10.	Isolation in a special class has a negative effect on the social and emotional development of a special-needs student.	5	4	3	2	1
11.	The special-needs child will probably develop academic skills more rapidly in a special classroom than in a regular classroom.	5	4	3	2	1
12.	Most special-needs children do not make an adequate attempt to complete their assignments.	5	4	3	2	1
13.	Integration of special-needs children will require significant changes in regular classroom procedures.	5	4	3	2	1
14.	Most special-needs children are well behaved in the classroom.	5	4	3	2	1

		SA	A	U	D	SD
15.	The contact regular-class students have with mainstreamed students may be harmful.	5	4	3	2	1
16.	Regular-classroom teachers have sufficient training to teach children with special needs.	5	4	3	2	1
17.	Special-needs students will monopolize the teacher's time.	5	4	3	2	1
18.	Mainstreaming the special-needs child will promote his/her social independence.	5	4	3	2	1
19.	It is likely that a special-needs child will exhibit behavior problems in a regular classroom setting.	5	4	3	2	1
20.	Diagnostic-prescriptive teaching is better done by resource-room or special teachers than by regular-classroom teachers.	5	4	3	2	1
21.	The integration of special-needs students can be beneficial for regular students.	5	4	3	2	1
22.	Special-needs children need to be told exactly what to do and how to do it.	5	4	3	2	1
23.	Mainstreaming is likely to have a negative effect on the emotional development of the special-needs child.	5	4	3	2	1
24.	Increased freedom in the classroom creates too much confusion.	5	4	3	2	1
25.	The special-needs child will be socially isolated by regular-classroom students.	5	4	3	2	1
26.	Parents of a special-needs child present no greater problem for a classroom teacher than those of a normal child.	5	4	3	2	1
27.	Integration of special-needs children will necessitate extensive retraining of regular teachers.	5	4	3	2	1
28.	Special-needs students should be given every opportunity to function in a regular-classroom setting, where possible.	5	4	3	2	1
29.	Special-needs children are likely to create confusion in the regular classroom.	5	4	3	2	1
30.	The presence of special-needs students will promote acceptance of differences on the part of regular students.	5	4	3	2	1

SECTION III: Observation

An important part of this research involves the observation of special-needs students in the regular classroom. Please consider having me into your classroom for a one hour observation.

If you are presently teaching a special-needs student(s), and would be willing to permit a one-hour observation of that student(s) in your classroom, please sign your name and provide your telephone number below that I may contact you to schedule an appropriate time for the observation.

Thank you very much for your consideration.

Name: _____

Telephone: _____

SECTION III: Observation

An important part of this research involves the observation of special-needs students in the regular classroom. Please consider having me into your classroom for a one hour observation.

If you are presently teaching a special-needs student(s), and would be willing to permit a one-hour observation of that student(s) in your classroom, please sign your name and provide your telephone number below that I may contact you to schedule an appropriate time for the observation.

Thank you very much for your consideration.

Name:_____

Telephone:_____

Please have your cooperating teacher indicate his/her approval of this observation by signing on the line below:

Cooperating Teacher:_____

Rotated Factor loadings by Item

Item Number	1	2	3	4	5
30	.69				
18	.68				
6	.66				
21	.60				
23	.59				
28	.51				
15	.48	(.40)			
25	.44				
14		.69			
19		.66			
29		.60			
9		.54			
7		.53			
3		.37			
16			.72		
27			.68		
8			.66		
13			.38		
17				.45	
22				.43	
24				.41	
5				.37	
2					.60
11					.50
10					.49
4					.44

Appendix C

Classroom Observation Instrument

TEACHER CLASSROOM ACCEPTANCE BEHAVIOR

PART I

TSA_____ TAB_____ E___ I___

HANDICAPPING CONDITIONS

SCHOOL_____

GRADE LEVEL_____

TYPE OF SCHOOL (SPECIAL WING, HALF-DAY RESOURCE, FULL-DAY RESOURCE)

_____

ENVIRONMENTAL NEEDS (SEATING AND ENVIRONMENT)

NUMBER OF HANDICAPPED STUDENTS PRESENT IN CLASS_____

NUMBER OF NON-HANDICAPPED STUDENTS PRESENT IN CLASS_____

PART II - ENVIRONMENTAL PREPRATION

Categories		BEHAVIOR TOWARD HANDICAPPED: Positive	Negative
1. NEEDED ADAPTATIONS IN THE ENVIRONMENT ARE MADE FOR THE HANDICAPPED			
A. ADAPTATION IS NOT NEEDED	___		
B. ADAPTATION IS NEEDED AND PROVIDED	___		
C. ADAPTATION IS NEEDED AND NOT PROVIDED	___		
2. SEATING OF HANDICAPPED - LEARNING			
A. SPECIAL SEATING NOT NEEDED	___		
B. SEATED APPROPRIATELY FOR BEST LEARNING	___		
C. NOT SEATED APPROPRIATELY FOR BEST LEARNING	___		
3. SEATING OF HANDICAPPED - MONITORING			
A. SEATED THAT THE TEACHER CAN EASILY MONITOR PROGRESS	___		
B. NOT SEATED THAT THE TEACHER CAN EASILY MONITOR PROGRESS	___		

PART III - INTERACTION

	BEHAVIOR TOWARD HANDICAPPED	
	Positive	Negative
4. PRAISING STUDENTS		
HANDICAPPED		
NON-HANDICAPPED		
5. CRITICIZING STUDENTS		
HANDICAPPED		
NON-HANDICAPPED		
6. GIVING FEEDBACK		
HANDICAPPED		
NON-HANDICAPPED		
7. INTERRUPTING STUDENTS		
HANDICAPPED		
NON-HANDICAPPED		
8. CALLING ON STUDENTS		
HANDICAPPED		
NON-HANDICAPPED		

SCORING SHEET

PART II - ENVIRONMENTAL

CATEGORIES $\frac{1 + 2 + 3}{3}$

SCORING:
0.55 - 1.00 = Positive
0.00 - 0.54 = Negative

PART III - INTERACTION

ADJUSTED RESPONSE - HANDICAPPED

POSITIVE RESPONSES:

$\frac{\text{CATEGORIES } 4 + 6 + 8}{\text{Number of Handicapped}}$

NEGATIVE RESPONSES:

$\frac{\text{CATEGORIES } 5 + 7}{\text{Number of Handicapped}}$

ADJUSTED RESPONSE = POSITIVE - NEGATIVE

ADJUSTED RESPONSE - NON-HANDICAPPED

$\frac{\text{CATEGORIES } 4 + 6 + 8}{\text{Number of Non-Handicapped}}$

$\frac{\text{CATEGORIES } 5 + 7}{\text{Number of Non-handicapped}}$

ADJUSTED RESPONSE = POSITIVE - NEGATIVE

SCORING:

1.00 = ADJUSTED RESPONSE TO THE HANDICAPPED IS EQUAL TO OR ABOVE THE ADJUSTED RESPONSE TO THE NON-HANDICAPPED

0.50 = ADJUSTED RESPONSE TO THE HANDICAPPED IS BELOW THE ADJUSTED RESPONSE TO THE NON-HANDICAPPED, BUT IN THE POSITIVE RANGE

0.00 = ADJUSTED RESPONSE TO THE HANDICAPPED IS BELOW THE ADJUSTED RESPONSE TO THE NON-HANDICAPPED, AND IN THE NEGATIVE RANGE

COMBINED SCORE:

Environmental + Interaction

0.00 - 1.04 = Low/Negative
1.05 - 1.54 = Moderate/Positive
1.55 - 2.00 = High/Positive

Teacher Classroom Acceptance Behavior

Definition of Categories:

Category 1 - Needed Adaptations In The Environment Are Made For The Handicapped

The comfort of the handicapped students and the ease of movement for the handicapped students are provided by the teacher. Adaptations in the environment (e. g., appropriate height desks/tables, correct lighting, appropriate width aisles) to meet the physical needs of the students are provided.

This category does not include adaptions in the lesson or any learning material presented.

Category 2 - Seating of the Handicapped-Learning

The teacher provides a seating arrangement that facilitates the handicapped students' ability to learn (e. g., partially sighted student is seated close to visual material, hearing impaired student is seated close to the teacher or to the individual presenting material, hyperactive student is seated so that he can move when necessary.)

Category 3 - Seating of the Handicapped-Monitoring

The teacher does not unduly isolate the handicapped. The handicapped students are included in the regular seating arrangement, positioned so that the teacher can easily observe the students' progress.

Category 4 - Praising Students

Any teacher statement that appropriately reinforces the

students' behavior. This statement goes beyond a statement of feedback. Statements that include terms such as: "fine," "excellent," and "good" are included in this category.

Category 5 - Criticizing Students

Any statement that ridicules or condemns the students' behavior is included in this category. The statement goes beyond feedback to the students and is not constructive in nature. A statement such as: "I wouldn't expect you to know any more than that," would be included in this category. Though it does give feedback to the student, it is negative and in no way constructive.

Category 6 - Giving Feedback

Any teacher statement or action that gives constructive information and/or direction to the students concerning their behavior. No teacher acceptance or rejection of the students' behavior (praise or criticism) is noted in the statement. Statements such as: "You will want to check number 3 again," and "Go ahead, you are on the right track," would be included in this category.

Category 7 - Interrupting Students

Any statement or action by the teacher prior to the completion of the student's statement.

Note: Following the coding of an interruption, the nature of the interruption is coded (i. e., praise, criticism, feedback).

Category 8 - Calling on Students

Requesting particular students to respond to a question or direction.

In all categories, verbal statements are recorded. Non-verbal actions are recorded only if they are used as a definite response, and in place of a verbal statement, such as: 1) nodding the head to indicate, "Yes"/"No," 2) pointing to indicate. "You are next," 3)shaking the head to indicate, "Stop doing that."

Pre-Observation Preparation

In a pre-observation discussion with the classroom teacher, the observer needs to arrange for the following: 1) an observation time in which the class will be involved in a normal interactive instructional activity, and 2) a seating chart with all handicapped students, and their handicapping conditions, noted for the time of the observation.

Additionally, the observer will need to take the following to the scheduled observation: 1) a stop-watch or watch with a second-hand, 2) a pencil, and 3) the observation instrument.

Directions for Coding and Interpreting

Coding

Part I - Background Information - Part I of the instrument is completed prior to the observation. The observer, prior to going to the observation, completes the following sections of Part I: School, Grade Level, Type of School, and TSA (Teacher Stated Attitude). In a brief discussion with the classroom teacher immediately prior to the observation, the handicapped conditions and learning needs sections of Part I are completed. Additionally, the observer must check the location of each handicapped student in the classroom (according to the seating chart provided by the teacher). The classroom teacher should verify that the handicapped students are seated in their designated seats.

The TAB (Teacher Acceptance Behavior) is completed after the interpretation of the coding.

Part II - Environmental Needs - Part II is coded during the first 15 minutes of the observation. The information provided in Part I of the survey (Handicapping Conditions, and Learning Needs) are utilized in coding Part II.

Category I - Needed Adaptations in the Environment are Made for the Handicapped. Each student not requiring an adaptation in the environment is counted, and that total number is recorded in Space A - Adaptation is not needed. Next, each student who requires environmental adaptation is observed. The total number of students receiving the required environmental adaptation is recorded in Space B - Adaptation is needed and provided. The total number of students not receiving required environmental adaptations is recorded in Space C - Adaptation is needed and not provided.

Category 2 - Seating of the Handicapped-Learning. Each student not requiring special seating to facilitate his/her ease in learning is counted, and that total number is recorded in Space A - Special seating not needed. Next, each student requiring special seating is observed. The total number of students receiving the appropriate seating is recorded in Space B - Seated appropriately for best learning. The total number of students not receiving the appropriate seating is recorded in Space C - Not seated appropriately for best learning.

Category 3 - Seating of the Handicapped-Monitoring. The placement of each handicapped student in the classroom is observed. Each student not unduly isolated, or seated such that the teacher can easily monitor his/her progress, is counted. This total number

is recorded in Space A - Seated that the teacher can easily monitor progress. Each student unduly isolated, or seated that the teacher cannot easily monitor his/her progress, is counted. This total number is recorded in Space B - Not seated that the teacher can easily monitor progress.

Part III - Interaction - Part III is coded during the last 45 minutes of the observation. The observer records each teacher response to each handicapped and non-handicapped student in each category in the space provided under each category.

Time Factor - Record one interaction for every 30 seconds that the same interaction continues.

Example: The teacher provides 150 seconds of feedback to a handicapped student.

	Positive	Negative
Giving Feedback		
Handicapped			
Non-handicapped		

Number Factor - Record the number of students (handicapped and non-handicapped) involved in each response.

Example: 3 handicapped in class

22 non-handicapped in class

The teacher gives feedback to 2 handicapped students and 5 non-handicapped, and then includes the entire class.

	Positive	Negative
Giving Feedback		
Handicapped 11 (3) Non-handicapped ~~HH~~ (22)		

Interpreting

Part II - Environmental Needs (Categories 1-3)

Category I - Needed Adaptations in the Environment are Made for the Handicapped. Items A (Adaptation is not Needed) and B (Adaptation is Needed and Provided) is considered a negative behavior. To interpret the coding in this category, total the positive codings (items A & B), and divide by the total number of handicapped students present in the classroom. A score ranging from 0.65 to 1.00 is recorded as a positive behavior in this category. Place the score and a check (✓) in the positive column for this category. A score of 0.54 or below is recorded as a negative behavior. Place the score and a check (✓) in the negative column for this category.

Category 2 - Seating of the Handicapped - Learning. Items A (Special Seating not Needed) and B (Seated Appropriate for Best Learning) are considered positive behavior. Item C (Not Seated Appropriately for Best Learning) is considered a negative behavior. To interpret the coding in this category, total the positive codings (Items A & B) and divide by the total number of handicapped students present in the classroom. A score ranging from 0.55 to 1.00 is

recorded as a positive behavior in this category. Place the score and a check (✓) in the positive column for this category. A score of 0.54 or below is recorded as a negative behavior. Place the score and a check (✓) in the negative column for this category.

Category 3 - Seating of Handicapped - Monitoring. Item A (Seated that the Teacher Can Easily Monitor Progress) is considered a positive behavior. Item B (Not Seated that the Teacher Can Easily Monitor Progress) is considered a negative behavior. To interpret the coding in this category, divide the total number of codings in item A, and divide by the number of handicapped students present in the classroom. A score ranging from 0.55 to 1.00 is recorded as a positive behavior in this category. Place the score and a check (✓) in the positive column for this category. A score of 0.54 or below is considered a negative behavior. Place the score and a check (✓) in the negative column for this category.

Part III - Interaction (Categories 4-8)

Each category in Part III is interpreted as follows: 1) Record the total number of responses directed to the handicapped in the category and divide by the number of handicapped students present. 2) Record the total number of responses directed to the non-handicapped, and divide by the total number of non-handicapped students present. 3) If the per-student response to the handicapped is equal to or greater than the per-student response to the non-handicapped, record a positive behavior toward the handicapped. If the per-student response to the handicapped is below the per-student

response to the non-handicapped, record a negative behavior toward the handicapped in that category.

Example:

3 handicapped

27 non-handicapped

Categories	Positive	Negative
4. Praising Students	✓	
Handicapped 𝍸 (5/3 = 1.7) Non-handicapped 𝍸 1 (6/27 = 0.22)		

NOTE: Category 5 (Criticizing Students) and Category 7 (Interrupting Students) are negative behaviors. The interpretation is, therefore, reversed for these two categories.

This interpretation can yield useful information to the classroom teacher if there are a number of codings in each category. However, if there are one or two codings in a category, the question of the strength of the coding is questioned. One praise response to the non-handicapped is not sufficient to interpret a negative behavior toward the handicapped in that category. Therefore, interpretation in this manner should be limited to categories that have five codings or more. If a category has less than five codings, the interpretation should be <u>equal acceptance</u>, and interpreted as a <u>positive behavior</u>.

Scoring

Part II - Environmental Needs (Categories 1-3)

The total score for Part II is calculated by totalling the scores in categories 1-3, and dividing by the number of categories (3). A total score from 0.55 to 1.00 is recorded as a positive score. A total score of 0.54 or below is recorded as a negative score. Record this total score in the space beside the Letter I (Part I - TAB).

Part III - Interaction (Categories 4-8)

The total score for Part III is caclulated as follows:

1. Total the positive responses to the handicapped in Part III (Categories 4 + 6 + 8), and divide by the total number of handicapped students present in the classroom.
2. Total the negative responses to the handicapped in Part III (Categories 5 + 7), and divide by the total number of handicapped students present in the classroom.
3. Subtract the negative response to the handicapped from the positive response to the handicapped. This score becomes the adjusted response to the handicapped.
4. Total the positive responses to the non-handicapped in Part III (Categories 4 + 6 + 8), and divide by the total number of non-handicapped students present in the classroom.
5. Total the negative responses to the non-handicapped in Part III (Categories 5 + 7), and divide by the total

number of non-handicapped students present in the classroom.

6. Subtract the total negative response to the non-handicapped students from the total positive response to the non-handicapped. This score becomes the adjusted response to the non-handicapped.
7. Compare the adjusted response to the handicapped to the adjusted response to the non-handicapped. If the adjusted response to the handicapped is equal to or greater than the adjusted response to the non-handicapped, a positive behavior is noted. If the adjusted response to the handicapped is below the adjusted response to the non-handicapped, a negative behavior is noted.

The total score for Part III (interaction) is assigned as follows:

1. A score of 1.00 is assigned if the adjusted response to the handicapped is equal to or above the adjusted response to the non-handicapped.
2. A score of 0.50 is assigned if the adjusted response to the handicapped is below the adjusted response to the non-handicapped, but remains in the positive range for adjusted response to the handicapped (+5.55 as compared to -5.55).
3. A score os 0.00 is assigned if the adjusted response to the handicapped is below the adjusted response to the

non-handicapped, and is the negative range for adjusted response to the handicapped.

Record the assigned score for Part III (Interaction) beside the letter I (Part I - TAB).

Combined Score - Part II - Environmental, and Part III - Interaction.

The combined score is calculated by adding the environmental score (E) to the interaction score (I). The assigned weight for this combined score is as follows:

1) 0.00 - 1.04 = low acceptance/negative

2) 1.05 - 1.54 = moderate acceptance/positive

3) 1.55 - 2.00 = high acceptance/positive

Regular Classroom Teachers' Attitudes Toward Mainstreaming Handicapped Students: A Study of the Stated Attitude and Its relation to Selected Variables and Acceptance Behaviors

Alice Crayton Alexander

ABSTRACT

The purposes of this study were to (1) investigate the attitude and acceptance behaviors of the regular-classroom teachers toward the present movement of educating handicapped students in the regular classroom, and (2) to investigate selected variables that may affect the attitude and acceptance behaviors, in order to have the findings of the study serve as one basis for future curriculum planning in teacher education programs as well as for in-service program development for local education sytems.

The stated attitude data were collected from the responses of 187 regular-classroom teachers and student interns to the questionnaire, A Survey of Teachers' Opinions Relative to Mainstreaming Special Needs Children (STORMS), which was developed by Dr. Barbara Iarrivee and Dr. Linda Cook. The acceptance behavior data were collected from 40 regular-classroom teachers and student interns who were presently teaching handicapped students and who volunteered for the observation portion of this study. The Teacher Classroom Acceptance Behavior observation instrument designed by the author, was used to collect the observation data.

Correlations and analyses of variance were conducted. The results indicated significant relations between the teachers' stated

attitude from the questionnaire and (1) the year the teachers were certified, (2) the teachers' perceived degree of success teaching handicapped students, (3) the teachers' perception of the availability of support service, and (4) the teachers' perception of the level of administrative support. No significant relation was found between the teachers' stated attitude and (1) the number of handicapped students the teachers had taught, (2) the type of school in which the teachers were teaching (i. e., half-day resource room, full-day resource room, special wing), (3) the number of semester hours of special education course work the teachers had completed, (4) the acceptance behaviors of the regular-classroom teachers as observed in the classroom, and (5) the grade level the teachers are presently teaching. The majority of the regular classroom teachers (54%) were rated by the questionnaire as having an "undecided" attitude toward mainstreaming, while 34 percent had a "positive" attitude and 12 percent had a "negative" attitude. The mean score on the attitude questionnaire was 3.15 on a scale of 1 to 5. The range of scores was 1.23-4.43.

Support for establishing more positive attitudes toward mainstreaming via (1) success experiences with teaching handicapped students, (2) special education coursework and inservice activities relevant to the regular classroom with specific objectives involving attitude change, and (3) activities stressing the importance of support services and administrative support, was forthcoming from this study.

VITA

Alice Crayton Alexander
320 Sunset Drive
Cumberland, Maryland 21502

PERSONAL INFORMATION

Telephone : Home: 301-724-8789; Office: 301-689-4374
Birthdate : April 5, 1943
Marital Status: Married, two children

EDUCATION

M. Ed. (1976)	Frostburg State College	Major: Educational Administration & Supervision
B. A. (1965)	West Virginia Wesleyan	Major: Speech & Drama

PROFESSIONAL EXPERIENCE

1/83 to Present	Coordinator of Early Childhood and Elementary Field Experiences, Frostburg State College (Maryland).
1/76 to 12/82	Instructor in Education, Frostburg State College.
1/75 to 6/75	Administrative Intern, Bishop Walsh High School, Cumberland, Maryland.
1/75 to 6/75	Teacher of English (part-time), Bishop Walsh High School.
3/73 to 6/73	Coordinator of the Public Library Survey of Allegany County, Maryland, Annapolis Research Corporation, Houston, Texas.
6/72 to 8/72	Instructor in Speech (part-time), Allegany Community College, Cumberland, Maryland.
9/71 to 6/73	Substitute Teacher, Allegany County Public Schools, Cumberland, Maryland.
6/69 to 8/69	Teacher, Head Start Program, Ohio County Public Schools, Wheeling, West Virginia.
9/67 to 6/68	Teacher of Social Studies, West Liberty Junior High School, Ohio County Public Schools.
6/67 to 8/67	Teacher, ESEA Reading Program, Laurel Highlands Public Schools, Uniontown, Pennsylvania.

9/66 to 6/67	Teacher of Speech, DuVal High School, Prince George's County Public Schools, Upper Marlboro, Maryland.
6/66 to 8/66	Teacher, Head Start Program, Laurel Highlands Public Schools, Uniontown, Pennsylvania.
9/65 to 6/66	Teacher of History, Wheaton High School, Montgomery County Public Schools, Rockville, Maryland.

AWARDS

Drama Scholarship, West Virginia Wesleyan College
Wesleyan Key for Outstanding Contributions to Campus Activities, West Virginia Wesleyan College
Alpha Psi Omega (drama honorary), West Virginia Wesleyan College

PROFESSIONAL ORGANIZATIONS

Phi Delta Kappa (past Vice-President)
Maryland Association of Teacher Educators
Council for Exceptional Children
Kappa Delta Pi