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ROSCOE, BRUCE KRAIG

ATTITUDES OF REGULAR CLASSROOM TEACHERS TOWARD THE INTEGRATION OF STUDENTS WITH VISUAL IMPAIRMENTS INTO REGULAR EDUCATION PROGRAMS

The University of North Carolina at Greensboro

PH.D. 1980

ATTITUDES OF REGULAR CLASSROOM TEACHERS TOWARD THE INTEGRATION OF STUDENTS WITH VISUAL IMPAIRMENTS INTO REGULAR EDUCATION PROGRAMS

by

Bruce K. Roscoe

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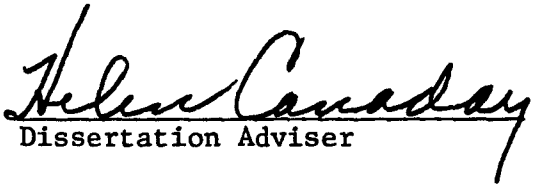

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APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

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June 26, 1980
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ABSTRACT

ROSCOE, BRUCE K. Attitudes of Regular Classroom Teachers Toward the Integration of Students With Visual Impairments Into Regular Education Programs. (1980) Directed by: Dr. Helen Canaday. Pp. 150.

In recent years interest has developed concerning mainstreaming exceptional students into regular classroom programs. The present exploratory study was designed to investigate the attitudes of regular classroom teachers on a variety of topics associated with the integration of visually impaired students into regular classes. The aims of the study were: (a) to explore the support services, materials and educational preparation regular classroom teachers who were educating mainstreamed visually impaired students believed were required in order to more adequately meet the educational needs of these students, (b) to determine the attitudes of teachers toward visually impaired students and the mainstreaming of them into regular classrooms, and (c) to provide an information base to assist professionals in the field of education in developing effective educational and administrative policies to facilitate mainstreaming visually impaired students.

A descriptive research design was employed and questionnaires were distributed to all regular classroom teachers in the public schools in Greensboro, North Carolina, who at the time of the study were teaching mainstreamed visually impaired students. Seventy-eight of the teachers (85 percent of the population) comprised the sample for this study. A 25-item data collection instrument, entitled The Teacher Attitude

Inventory, was constructed for use in the research. Data were analyzed using frequencies, means, standard deviations, and percentages for each individual item. The results were examined for all teachers combined and by various groupings based on specific demographic variables.

Eight major conclusions were drawn from the analysis of the data: (1) A plurality of the participants expressed attitudes favoring integrating visually impaired students into regular classrooms. (2) A majority of the regular classroom teachers believed visually impaired students were not less intelligent than the students' normally sighted peers and age appropriate behavior should be expected of visually impaired students. (3) Approximately half of the teachers stated visually impaired students, because of their specialized problems, should meet different academic standards when placed in regular classrooms. (4) Concerning teacher responsibility for the education of mainstreamed visually impaired students, a majority of teachers responded in such ways as to indicate they believed regular classroom teachers shared, and should share, this responsibility. (5) An overwhelming majority of regular classroom teachers believed course work in special education and inservice training opportunities would be highly useful to teachers of mainstreamed visually impaired students. (6) Regular classroom teachers strongly asserted specialized materials for use with visually impaired students were required but not readily available. (7) A vast majority of teachers stated specialized support services were highly valued and resource personnel were highly supportive. (8) Nearly half of the teachers stated support personnel were not readily available for consultation.

For future considerations, 11 categories of suggestions were obtained from the teachers concerning how to improve the quality of education of visually impaired students and to make mainstreaming these students an easier experience for regular classroom teachers. In addition, on the basis of the findings and conclusions of this study, recommendations for future action and research were suggested.

ACKNOWLEDGMENTS

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Appreciation is also expressed to Marilyn Fisher of the Greensboro Public Schools who identified the members of the target population of the study, and to Marje Wright who helped analyze and interpret the data. Their assistance greatly facilitated the research effort. The cooperation of the administrators and teachers in the Greensboro Public Schools, Greensboro, North Carolina, enabled this project to be completed, and the author thanks them.

Last, the author would like to thank Mary Danaher Roscoe, his wife, Blase Kollin Roscoe, his brother, and J. Michael Shaner, his friend, for their continued support, interest, and encouragement throughout the completion of this work.

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CHAPTER I

INTRODUCTION

Visually impaired children have been enrolled in public school systems since the turn of the century. Prior to that time such children received their education in residential schools for the blind (Kirk & Gallagher, 1979). Haring (1978) suggested the earliest efforts to educate handicapped/exceptional children were devoted to those children who possessed either a hearing or a visual handicap. In the early days, it appeared natural that the only provision for the education of these two groups of children should be in a special school. From the beginning, residential schools have made valuable educational contributions to the later initiated programs for visually impaired children.

Plans for educating visually impaired children with sighted children in the public school systems resulted from the efforts of visually impaired adults. These individuals called on government administrators and requested that visually impaired children, who would eventually live and work with sighted adults in the future, have the opportunity to interact with sighted individuals in school settings during the school years (Farrell, 1956). As a result of their requests, early programs were developed in a few large cities throughout the country which placed visually impaired children in regular schools. These programs were quite different from many of those which exist today. As professionals acquired greater experience with

integrated educational settings in which sighted and visually impaired children were taught together, administrators realized the potentialities of such programs and more integration was achieved.

The first programs in the public schools were highly specialized, and some of them appeared to be separate educational institutions within educational institutions. This was because the classrooms for visually impaired students were set aside in one part of the building, and there was little opportunity for visually impaired students to associate with their sighted peers. The early administrative policy, consequently, deprived visually impaired children of many opportunities to derive the sociological value which had prompted visually impaired adults originally to request public school education. Such early programs were referred to as special classes or braille classes (Jones & Collins, 1966).

The trend today, as dictated by both federal and state legislation, is to provide more integration of visually impaired children in regular classes, i.e., to have them actually enrolled in regular classrooms and return to the room provided with specialized equipment and a qualified teacher only when they need help in order to function more effectively. "Resource rooms" is the name used to refer to the special classrooms. The label has been applied to rooms, because each room functions as a resource to the visually impaired students, to the teachers in the regular classroom, and to the other professionals involved in meeting the educational needs of these children.

Since the 1975 passage of Public Law 94-142, the Education for All Handicapped Children Act, the purpose of which was to make certain all

handicapped children be educated in the least restrictive environment and needed services be provided them, there has been a tremendous amount of literature and discussion concerning educational integration of exceptional children. In spite of the volume of literature, however, there has been surprisingly little empirical research reported concerning the education of visually impaired students.

Exceptional children have been placed in resource programs, and have spent considerable time integrated in the regular classrooms, yet there have been few studies reported dealing with attitudes of regular classroom teachers toward teaching exceptional students, and none focusing specifically on regular teacher attitudes toward visually impaired students. Conine (1969), Harasymiw and Horne (1975), Jordan and Proctor (1969), Panda and Bartel (1972), Schmidt and Nelson (1969), Semmell (1959), and Warren and Turner (1966) have examined teacher characteristics associated with attitudes toward exceptional children. Other authors have looked at the effects of integration on teachers' attitudes (Bradfield, Brown, Kaplan, Rickert, & Stannard, 1973; Johnston, 1972; Shotel, Iano, & McGettigan, 1972). In none of these investigations, however, have the attitudes of regular classroom teachers concerning education of visually impaired children been the primary research focus.

It has long been recognized that one of the foremost problems in the integration of exceptional children is the regular classroom teachers' attitudes toward the exceptional children as reflected by their willingness to include these children in regular educational programs (Haring, Stern, & Cruickshank, 1958; Shotel, et al., 1972). It

is generally agreed by professionals (Harasymiw & Horne, 1975; Haring et al., 1958: Warren & Turner, 1966) that while integration of exceptional children may be imposed from without by binding laws, it is the way that teachers perceive their role in the classroom and how they respond to the needs of all of the students that ultimately makes a difference in how effective a given program is.

Purpose of the Study

The aim of the present research was to explore the support services, resources, and qualifications that regular classroom teachers, who were at the time teaching visually impaired students, believed were needed in order to serve to the fullest visually impaired students, and to determine the general attitude of the teachers toward visually impaired students. It was believed the articulation of these topics would indicate where educational, administrative, and supportive staff personnel could most profitably direct their efforts to facilitate mainstreaming visually impaired students. The collection of the following information was seen as being important to this effort:

1. Teachers' attitudes toward mainstreaming visually impaired students.
2. Teachers' general attitudes toward visually impaired students.
3. Teachers' attitudes toward the need for knowledge of visual handicaps.
4. Teachers' attitudes toward materials to employ with visually handicapped students.
5. Teachers attitudes toward responsibility for the visually impaired students.

6. Teachers' attitudes toward supportive services.

7. Demographic data concerning the teachers.

Justification for the Study

Since there was a severe lack of information concerning the attitudes of regular classroom teachers who were educating mainstreamed visually impaired students toward the teaching of these children, a descriptive self-report study design was considered appropriate for acquiring data in this area. The reporting of teacher attitudes discovered from such a study was seen as the first of several steps in developing and/or modifying programs to enhance the education of visually impaired students in a regular classroom setting. The results of such an investigation also have implications for college and university personnel involved in the preparation of regular classroom teachers as they may lead to curriculum changes.

Definitions

The following terms were defined according to their use in the present study:

Attitude refers to an organized reaction of an individual toward something in one's environment (object, person, process or idea) as a result of previous knowledge and/or experience (Jordan & Proctor, 1969).

Blind refers to those individuals who are totally without vision or who have light perception only (Baraga , 1976).

Exceptional refers to any child who deviates from the norm (Haring, 1978).

Integration refers to the inclusion of exceptional students in the regular classroom for the majority of the school day (Kirk & Gallagher, 1979).

Legally Blind refers to those individuals who have central vision acuity of 20/200 or less in the better eye after correction or have peripheral vision that is reduced to a total of 20 degrees or less in the better eye (American Foundation for the Blind, 1976).

Mainstreaming refers to an administrative procedure for keeping exceptional children in the regular classroom for the majority of the school day (Kirk & Gallagher, 1979).

Partially Seeing refers to those individuals with a visual acuity greater than 20/200 but not greater than 20/70 in the better eye with correction (American Foundation for the Blind, 1976).

Regular Classroom Teacher refers to an individual who has been certified by an appropriate authority to teach in regular graded classes for the majority of the school population (Miles, 1964).

Special Educator refers to an individual who has been certified by an appropriate authority to teach students who are deemed exceptional in some way (Miles, 1964).

Visually Impaired refers to the total group of individuals who require special educational provisions because of visual problems (Barraga, 1976).

Basic Assumptions

The basic assumptions made in relation to this study were the following:

1. The integrated education of visually impaired students with sighted students is an appropriate educational policy and will continue in the immediate future.
2. A descriptive study reporting the attitudes of regular classroom teachers concerning the integration and education of visually impaired students would yield useful and relevant data about their perceived needs and qualifications that could be reported to other professionals concerned with either the education of visually impaired students or the preparation of future educators.
3. The attitudes of regular classroom teachers concerning topics related to educating visually impaired students in the regular class could be derived from responses to a Likert-type scale.

Limitations

Although it may be assumed that nearly all school systems are involved in integrating visually impaired students into regular classroom settings, the population for the present study was restricted to those regular classroom teachers employed by the Greensboro Public Schools who were involved in mainstreaming visually impaired students during the 1979-1980 academic school year. There were certain limitations associated with this design:

1. Only regular classroom teachers employed by the Greensboro City Schools had the opportunity to participate.
2. Only regular classroom teachers who had visually impaired students enrolled in their classes at the time of the study were participants.

As a consequence of these limitations, the results of this research may not be generalizable, but rather are descriptive of the regular classroom educators who were the subjects of this study.

CHAPTER II

RELATED LITERATURE

Concern over the education of exceptional children, including those who are visually impaired, has grown greatly in recent years as the result of parent initiative, judicial decisions, and enacted legislation. Research, however, has not always kept abreast of educational policy. While studies have sought to establish the consequences of mainstreaming to students who are exceptional in various ways, little has been done to ascertain the response and reactions of regular classroom teachers to these policy changes.

Research and literature relevant to the present study will be presented here in three sections. Section one, based largely on historical accounts and census data, is a review of past and present trends in program development concerning the education of visually impaired students. In section two information related to the willingness of regular classroom teachers to participate in mainstreaming programs is presented. Similarly, in section three the attitudes of regular classroom teachers associated with integration of exceptional students are found. There exists little research pertinent to these topics and the research that is available focuses primarily on the reactions of teachers who are involved with children whose exceptionalities are other than visual. Because of this scarcity of research related to teachers' attitudes and visually impaired students, it is believed that a review of the related research will be informative. The

chapter concludes with a summation of the literature and a statement of intent concerning the research of this study and its potential contribution to the general field of education of visually impaired students.

Trends in Education for Visually Impaired Students

The following topics are presented in this section: (1) the historical development of the education of the blind, (2) the history of the education of the partially sighted, and (3) some relatively recent changes in educational practices.

Education of the Blind

The education of individuals who are blind has a longer history than does that of persons who are partially sighted. Organized education of the blind originally took place in residential schools which dealt only with this population. According to Farrell (1950), the first school for the blind was established in Paris, France by Valentine Huay in 1785. In the United States, the first residential school for the blind (The New England Asylum for the Blind) was organized in 1829 (Ross, 1951). Since that time residential schools have been established, either under private or public control, in most states.

Perhaps it should be brought to attention that in the early nineteenth century, when the first educational settings for the blind were being established in this country, the boarding school format was considered the most appropriate and desirable type of educational facility

available. This was because such programs were highly regarded in Europe at the time, and the American schools were patterned after them (Lowenfeld, 1956). Despite the fact that residential settings provided an opportunity for productive training, it was recognized that there were significant shortcomings endemic to such educational settings. Among the most important disadvantages were routine, formality, segregation, and lack of family life.

As early as 1871, Samuel Gridley Howe, one of the great leaders in education of the visually impaired, predicted the modern trend toward mainstreaming:

> With the view of lessening all differences between blind and seeing children, I would have the blind attend the common schools in all cases where it is feasible . . . . Depend on it, one of the future reforms in the education of the blind will be to send blind children to the common schools, to be taught with common children in all those branches not absolutely requiring visible illustrations, as spelling, pronunciation, grammar, arithmetic, vocal music and the like. We shall avail ourselves to the special institutions less, and the common schools more. (Irwin, 1955, p. 128)

Howe's prediction was not fulfilled for many years, though there is presently a constant increase in the proportion of blind students being educated with their sighted peers each year.

In 1900, largely because of the efforts of visually impaired adults who believed blind students would benefit greatly from association with their sighted peers, the first public school class for the blind was organized in Chicago, Illinois (Lowenfield, 1973). Since that time special classes for blind students have been established in most of the large cities' school systems and in some intermediate-sized communities. When such programs were originally introduced, all

instruction for the blind was conducted in segregated special classes. Gradually, however, blind students were assigned for part of each school day to regular classes.

Education of the Partially Sighted

Though education of blind children has existed for centuries, education for partially sighted students is a more recent phenomenon, having begun in the twentieth century (Lennon, 1948; Smith, 1938). It was not until 1908 that educational authorities in England recognized that there was a population of students who were being poorly served educationally because of their visual problems. As a result of this awareness, special classes for students with limited vision were established. At that time only nearsighted children were admitted to these special settings, which were referred to as myope schools (Cutsforth, 1951).

In 1913 the first class for partially sighted students was organized in the United States (Hathaway, 1959). This class was established in Boston, Massachusetts, and was labeled a "semi-blind class." It was later called a "conservation of eye class," and still later was again changed to "sight-saving class" (Smith, 1938). Shortly following the organization of this class in Boston, a second class was begun in Cleveland, Ohio. The class differed from its segregated predecessors by initiating a program in which the children remained in the regular grades, but obtained their instruction which required close eye work in the special class (Pelone, 1957). Called a "cooperative class," it resembled what is now known as a resource room.

Current Educational Practices for the Visually Impaired

There have been numerous court decisions and legislative actions which have led to the integration and improvement in the education of exceptional children, including those who are visually impaired. Two court decisions which were representative of the judicial actions which have been taken and which have benefited exceptional individuals are Mills v. Board of Education of the District of Columbia, and Pennsylvania Association for Retarded Children v. the Commonwealth of Pennsylvania. Both cases were decided in 1971, and enhanced the services provided exceptional individuals.

The case of Mills v. Board of Education of the District of Columbia established the right of every child, including all handicapped children regardless of their handicap, to an equal opportunity for an education. The Pennsylvania Association for Retarded Children v. the Commonwealth of Pennsylvania case brought a class action suit to guarantee public support of education for all mentally retarded children. The decision of the court was in favor of full educational opportunity for the retarded and granted the right of the family and child to be notified and given legal due process before the child's educational status is altered. The rights upheld in these landmark cases were tremendously influential in stimulating the enactment of legislation written specifically for the benefit of exceptional individuals.

The federal government has relied on legislative action to deal with the education of exceptional children. Many laws have been

passed to ensure that exceptional children receive the educational services they need. Among these enactments were the following: (1) Public Law 88-164 (1963), which provided grants for research and demonstration projects in the area of education of the handicapped, (2) Public Law 89-313 (1965), which provided grants to states for children in state-operated or state-supported schools for the handicapped, and (3) Public Law 90-247 (1967), which provided resource centers, centers for deaf-blind children, and special funds for handicapped children.

Two of the most important federal laws passed concerning the education of exceptional children were Public Law 93-380 and Public Law 94-142. According to Abeson, Bolick, and Hass (1975), Public Law 93-380, the Education Act of 1974, required states that wished to retain eligibility for funds to develop procedures to ensure that, to the maximum extent appropriate, handicapped children, including children in public or private institutions, or other care facilities, are educated with children who are not handicapped. It further stipulated that special classes, separate schooling, or other removal of handicapped children from the regular education environment occur only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily.

The second major piece of federal legislation concerning the education of exceptional children is Public Law 94-142, which was passed in 1975 and took effect in 1977. Pelossi and Hocutt (1977) stated that the purpose of this act, entitled the Education for All Handicapped Children was:

> To assure that all handicapped children have available to them . . . a free, appropriate public education which emphasizes special education and related services to meet their unique needs . . . to assist states and localities to provide for the education of all handicapped children, and to assess and assure the effectiveness of efforts to educate handicapped children. (p. 3)

A major emphasis of this legislation was on placing the exceptional child in the least restrictive environment, or the most normal education setting possible. In this view the special class is preferable to the institution, the resource room is preferable to the special class, and the regular classroom is preferable to the resource room if the capabilities of the child permit. Abeson and Zettel (1977) explained that it was never intended that this legislation would force all exceptional children to be educated in the regular classroom. For many moderately to severely impaired children and multiply handicapped children, the normal classroom would clearly be inappropriate. The effect of PL 94-142 has been the mainstreaming of exceptional children who had previously been denied education in regular classrooms. As such, this has perhaps been the most important action taken on behalf of exceptional children.

Although, as has been indicated by the above cited court decisions and legislative acts, the integration of children representing other handicapping conditions is a relatively recent trend, children with visual impairments have been integrated or mainstreamed into regular classrooms for more than half a century (Jones, 1969; Misbach & Sweeney, 1970). Early professionals recognized children with visual impairments could be educated with their sighted peers with only minor modifications and adaptations, and the limitations imposed by a visual

disability did not require a special curriculum (Gearheart & Weishahn, 1976).

There has been a substantial increase in the total number of visually impaired students enrolled in public and residential schools rising from 5,818 in 1949 to 30,587 in 1975 (American Foundation for the Blind, 1976). There has also been a year-by-year decline in the percentage of visually impaired students enrolled in residential schools, and a year-by-year increase in such students in local schools. Whereas in 1949, approximately five percent of all visually impaired students were enrolled in local public schools, in 1977 over 70 percent were enrolled in public schools (Kirk & Gallagher, 1979).

The majority of visually impaired students in local public schools are assigned to a regular grade according to their age and level of academic achievement, and are given special education through resource rooms and itinerant teachers. The aims and objectives of the regular grade are predominate, even though the techniques utilized by an instructor may be special (Martin & Hoben, 1977). In other words, the general goals or objectives of education are primarily the same for visually impaired students, even though the procedures for attaining such goals may involve modification of instructional materials and/or special teaching procedures.

Regular teachers are now being required to mainstream visually impaired students at an unprecedented rate. This movement toward integration has resulted to a considerable extent from the convictions of professionals who praise its strength. Mainstreaming has been cited so frequently in professional literature one might mistakenly think it

a magic cure rather than a particular orientation toward supplying educational services to the majority of exceptional students. It has been treated as if full participation in regular educational programs would overcome any adverse problems facing exceptional children.

Despite the popularity and many positive aspects of mainstreaming visually impaired students, approximately 30 percent of this population is educated in other types of programs (Kirk & Gallagher, 1979). Currently there exist four educational programs which attempt to meet the academic needs of visually impaired students: residential schools, special class plan, cooperative plan, and integrated plan. Each program will be discussed briefly.

Residential schools. According to Jones (1969), all states either maintain residential schools for visually impaired students, or have made arrangements with neighboring states for this service. Standard educational programs with curricula similar to those in ordinary public schools are common in these institutions. Students in residential schools are provided total care, which includes educational, medical, and child care services.

Some residential schools have recently begun accepting day school pupils from the vicinity of the school, thus allowing these students to live in their own homes (Jones & Collins, 1966). Other residential schools send their students to public high schools as day school pupils while the students reside at the special institution (Deno, 1973). These programs are primarily for students requiring special subjects not included in the residential school curricula and only incidentally provide associations with sighted peers.

Special class plan. As has been previously mentioned, the initial provision for education of visually impaired students in local schools resulted in these students being placed full time with a special teacher during the school day. This plan was originally the only one available (Lowenfeld, 1956). Separate rooms for blind and partially seeing students were established with a specifically qualified teacher providing all instruction. Classes of this sort are referred to as self-contained or segregated day classes. The existence of such classes is becoming more rare as the mainstreaming movement becomes more popular.

Cooperative plan. The first clearly articulated departure from the special class plan involved participation by visually impaired students in certain specialized curricula in which the regular classroom teachers cooperated in the instruction. Hence, the term "cooperative" was used to label this plan (Berry, 1972). Under a cooperative plan the visually impaired student continues to be registered with the special teacher and maintains a homeroom with that teacher.

When the cooperative plan is utilized, the primary responsibility for academic achievement remains with the special teacher and separation from nonhandicapped students for instructional purposes is maintained (Dunn, 1973). At the present time, the plan appears to be a viable educational alternative for visually impaired students who have other handicapping conditions. Most multiple-handicapped students require highly individual instruction in very specialized areas. For these students, the cooperative plan appears to be an appropriate program for providing instructions (Jones & Collins, 1966).

Integrated plan. The most recent development in organizational patterns for teaching visually impaired students have been the resource teacher and the itinerant teacher programs (Cruickshank & Johnson, 1967). The resource and itinerant programs are also sometimes called integrated instructional programs (Misbach & Sweeney, 1970), emphasizing that these two organizational patterns are ones which most thoroughly integrate visually impaired students with sighted students for educational purposes. Both programs were developed largely during the 1950's, although some aspects of them have existed much longer and are the two types of programs currently most prevalent in local schools (Jones & Collins, 1966).

The primary difference between these programs is that the resource teacher is available within a single school building throughout the entire day and the itinerant teacher is not. The itinerant teacher may actually be present only part of a day or only on specially designated days, because one is providing services in two or more buildings. In both programs the teacher is trained to work with visually impaired students, and instruction is provided in a room separate from the regular classroom (Haring, 1978). The resource program can provide larger amounts of time per student since no travel time between schools is necessary. The itinerant program, on the other hand, provides instruction which is more likely to allow the visually impaired student to remain with one's sighted peers for more of one's education.

The unique feature of resource and itinerant teacher programs is that primary responsibility for the education of the visually impaired student is no longer with the special teacher, but is shifted to the

regular classroom teacher. In both programs the visually impaired student is enrolled in the regular classroom and uses the services provided by the special teacher only when these cannot be provided by the regular classroom teacher (Siegel, 1969). Jones (1969) attributed a number of advantages to these plans over the self-contained special class. The advantages include: (1) emphasis on the exceptional child's abilities and likeness to other children rather than on differences, (2) availability of a wealth of resources by including these students in general school activities, (3) more accessible services of specially prepared teachers, (4) full-time individualized instruction in the areas of greatest specialization, and (5) closer approximation of the social situations the visually impaired student will encounter in adult life.

Of the four educational programs presented, the integrated plan is by far the most widely implemented today. It is also the one which demands the most of the regular classroom teacher, and places the burden of the responsibility for educating the visually impaired student on this teacher.

Willingness of Regular Classroom Teachers

For many years the major response of public schools and American society to the needs of exceptional students was characterized by an out-of-sight, out-of-mind philosophy. Overcrowded institutions and segregated schools and classes attested to this fact. Recently, however, there has been an attempt to place exceptional students in settings where they will receive the fullest measure of educational

services available. Today, many professionals are making a concerted effort toward mainstreaming, yet are failing to recognize the barriers which must first be overcome (Pasanella & Volkmer, 1977). Although much has been written about the skills and competencies needed to teach exceptional students in regular classroom settings (Alonso, 1967; Glass & Meckler, 1972; Grosenick, 1975; Mangold, 1978a, 1978b; Orlansky, Fairchild, & Fairchild, 1977; Scholl, 1978), little has been written about the willingness of regular classroom teachers to participate in mainstreaming.

The purpose of the following section is to review research concerning regular classroom teachers' willingness to participate in mainstreaming. Unfortunately, a lack of studies concentrating on the willingness of teachers to mainstream visually impaired students was found. Because of this lack of research, the studies reported herein deal with the willingness of teachers to participate in mainstreaming students whose exceptionalities involve mental retardation, emotional disturbances, learning disabilities, and/or physical handicaps.

An early investigation of regular classroom teachers' views toward integrating exceptional students was conducted by Barngrover (1971). Barngrover determined that regular classroom teachers considered special class placement to be the appropriate setting for educating exceptional students. Reasons given in support of this view included: (1) teachers could remove academically slow students, (2) less disruption in the regular classroom, (3) less frustration and more success for the exceptional child, (4) more individual attention, (5) specialized help for special deficits, and (6) more preparation for the work world (Barngrover, 1971).

Shotel et al. (1972) administered a questionnaire to 128 regular classroom teachers to determine their beliefs and reactions to an integrative program of education for exceptional students. The questionnaire was designed in part to elicit teachers' views concerning whether exceptional students should be taught in special or regular classes. The data yielded by the study indicated the majority of the regular classroom teachers believed special class placement was the most appropriate setting for educating such students. A further finding of this investigation was that regular teachers, as a group, viewed themselves as being unqualified to teach exceptional students. As a consequence, the majority of the teachers were unwilling to engage in integrative programs if offered an option not to participate.

Gickling and Theobold (1975) questioned regular classroom teachers in an attempt to learn whether or not they were willing to engage in mainstreaming, and why they maintained their positions on the issue. The investigators found the overwhelming majority of teachers they queried were unwilling to be involved with a mainstreaming program. Gickling and Theobold (1975) further discovered that 85 percent of the educators believed they lacked the necessary skills to teach exceptional students.

In a related vein, Agard (1975) interviewed and observed regular educators who were at that time teaching exceptional children in integrated programs. Agard found the majority of the educators were unwilling to accommodate their teaching styles to meet more adequately the needs of the handicapped students. Most of the teachers were observed to stand in the front and center of the class and to lecture

to the class as a whole. In other words, the teachers were not doing anything extraordinary to accommodate the needs of the exceptional students in their classes. Agard (1975) interpreted this to be indicative of a lack of willingness to include this category of students in the regular classes. Jones, Gottlieb, Gushkin, and Yoshida (1978), in an evaluation of mainstreaming, have supported the findings of Gickling and Theobold (1975) and Agard (1975).

In an attempt to determine the attitudes of regular and special class teachers toward mainstreaming, Moore and Fine (1978) questioned both types of educators on this matter. The findings of their study indicated the teacher groups differed in their attitudes toward mainstreaming. Educators who had been specially trained to work with exceptional children were more accepting of mainstreaming these students than were regular classroom teachers (Moore & Fine, 1978). The results were interpreted as representing a lack of willingness on the part of regular classroom teachers to partake in mainstreaming programs of their own volition. Moore and Fine's study, as did the others, indicated the majority of regular classroom educators did not willingly participate in the mainstreaming of exceptional students in their classes.

Attitudes of Regular Classroom Teachers Associated With Integration of Exceptional Students

While integration of exceptional students may be imposed by external authorities, it is the way regular classroom teachers perceive their roles in the classroom and how they respond to the needs of all

of their students that ultimately makes a difference in how effective a given educational program is. As long ago as 1957, Pelone commented that mainstreaming places great responsibility on the regular teacher, and how the teacher feels about this responsibility influences the success that will be achieved:

> Unless this responsibility is assumed readily, the child then has no one particular person to whom he can turn for the guidance and assistance he needs especially during the early elementary years. If he identifies himself with his classroom teacher and derives comfort from the knowledge that she will welcome him with his problems as they arise, then satisfaction resulting from this acceptance will contribute materially to his happy adjustment in school. (Pelone, 1957, pp. 29-30)

Numerous professionals have reiterated Pelone's (1957) statement that the success of educational programs for exceptional students appears to be largely dependent upon the attitudes of classroom teachers toward integration of exceptional students (Conine, 1969; Haring et al., 1958; Lowenfeld, 1973; Martin, 1974). Conine (1969) stated the most important person is the teacher. The extent to which the regular classroom teacher is capable of producing an accepting atmosphere and removing psychosocial barriers for the exceptional student is critical to that student's success in the school setting.

The regular teacher holds the key to the exceptional student's satisfactory adjustment and successful integration. This teacher's resourcefulness and attitude will determine the extent to which one can effectively enrich the student's daily program, and thus, contribute to the student's total growth (Jones, Lavine, & Shell, 1972). It was Dennison's (1952) contention that if the teacher could truly believe the student's handicapping condition was offset by real

abilities and worked on that basis, the class, the parents, and the exceptional student would be aided immeasurably in living with the condition:

> The teacher's feeling about a youngster is the most contagious factor in the youngster's life. If the teacher accepts him, his schoolmates accept him, his parents accept him--and most important of all--the youngster accepts himself. (Dennison, 1952, p. 3)

Based on the above representative statements, it can be seen that if exceptional students are to be successfully integrated into the regular classroom for even a part of the school day, the attitudes of regular classroom teachers toward these children emerge as a major concern. Haring et al. (1958) stated teachers' attitudes toward and understandings about exceptional students are influential in determining the intellectual, social, and emotional adjustment of the students. Major (1961) suggested that, although regular classroom teachers have made a substantial preservice investment, the preparation does not always include adequate techniques for working with exceptional students. These teachers may feel their enterprise is being disrupted by a seeming misfit, and their feelings are not likely to be changed by pressure, parental demands, administrative demands, or exhortation.

In recent years a number of studies have been conducted in attempts to identify regular classroom teachers' attitudes toward integrating students with various types of exceptionalities into their classes (Blazovic, 1972; DeLeo, 1976: Fine, 1967; Grosenick, 1975; Harasymiw & Horne, 1975; Haring et al., 1958; Jordan & Proctor, 1969; Kingsley, 1967; Mandell & Strain, 1978; Schmidt & Nelson, 1968; Shotel et al., 1972; Vacc & Kirst, 1977). Though these works have focused on

students whose exceptionalities have been other than visual impairments, their findings are relevant to the present study for two reasons. The first is that such research indicates the importance of studies investigating teachers' attitudes regarding mainstreaming. The second reason is that they demonstrate what areas are important to examine when studying teacher attitudes. A selection of studies is included to present a background against which the present study may be better understood.

Proctor (1967) investigated the attitudes of certain groups of classroom teachers toward classroom integration of exceptional students, and examined the relationship of these attitudes to knowledge of disabilities and to kind and amount of experience in teaching exceptional students. The subjects were regular classroom teachers, special education teachers, ancillary personnel, and student teachers. The finding, with regard to regular classroom teachers, was that they were the least realistic in their attitudes toward classroom integration of exceptional students. Proctor's (1967) interpretation was that the group of teachers was least able to assess accurately what would be the appropriate placement of various exceptional students based on the students' educational abilities and needs.

In an elaboration, Jordan and Proctor (1969) looked at the relationships between knowledge of exceptional children, kind and amount of experience with them, and teacher attitudes toward their classroom integration. It was believed by these and other professionals (Haring et al., 1958; Kvaraceus, 1956; LaBue, 1959) that to a great extent attitudes of an individual toward something in one's environment

are dependent upon the amount and quality of information one possesses about the object, person, or process. For this reason, the teacher's knowledge of exceptional children was deemed an important area to examine in order to better understand teachers' attitudes. The data analysis indicated teaching experience increased one's knowledge about exceptional children, but did not increase positive attitudes toward regular classroom placement. The outcome, according to Kuhn (1971), did not support the position that once an exceptional student is mainstreamed positive attitudes will be developed by those who are associated with the exceptional student.

Blazovic (1972) designed a study to determine the attitudes of regular high school teachers toward integrating educable mentally retarded students. The results of the research indicated teachers ascribed greater academic, social, and vocational benefits to special classes than to regular classes, and did not perceive educable mentally retarded students as having the abilities/skills needed to succeed in academic classes. The teachers perceived educable mentally retarded students' behavior as being different (meaning more unruly) from that of normal students and additionally viewed them as a disruptive element in the regular classroom (Blazovic, 1972).

In a related work, DeLeo (1976) attempted to determine if there were any differences among key educator roles toward integration of educable mentally retarded students into regular classes. It was found that the Director of Special Education had the most favorable attitude toward integration, with the special education teacher and principal following, and the regular classroom teacher maintaining the

least favorable attitude. DeLeo (1976) concluded the regular teacher needs a better understanding of what is involved in the integration process.

The purpose of a study conducted by Shotel et al., (1972) was to determine how a program for integrating emotionally disturbed and educable mentally retarded students into regular classes with supportive resource room services would affect the attitude of regular class teachers toward exceptional students. A questionnaire was administered to elementary school regular class teachers to investigate this issue. The results of this research were that the majority of these teachers expressed negative attitudes toward mainstreaming. A secondary, but equally interesting, outcome of the study was the unanimity among the regular teachers concerning the need for special methods and materials when teaching exceptional students. Shotel et al. (1972) commented in light of this, that if regular classroom teachers believe they cannot teach exceptional students without an array of special methods and materials, then it is indeed unrealistic to expect them to accept with confidence, major responsibility for teaching exceptional students.

Harasymiw and Horne (1975) investigated the effect of a program designed to prepare teachers for integration of exceptional students into the regular class. A sample of teachers from integrated and non-integrated school settings was administered an attitudinal instrument. The findings indicated the teachers from integrated settings tended to have more favorable attitudes toward mainstreaming, a result at odds with that of Kuhn (1971) who found no such effect. Harasymiw and Horne (1975) further concluded there was no significant relationship between

the number of special education courses taken by a teacher and favorable attitudes toward mainstreaming.

In a more recent study, Vacc and Kirst (1977) explored the attitudes of regular classroom teachers toward mainstreaming emotionally disturbed students. Questionnaire responses indicated that, although these teachers seemed to recognize that it would be beneficial for emotionally disturbed students to be placed in regular classes, they believed emotionally disturbed children should be segregated into special classes in a regular school setting. The teachers viewed emotionally disturbed students as not accepted by normal students, and felt their placement in a regular class would be detrimental to the nonhandicapped students. They further believed emotionally disturbed students would have a negative effect on teachers. As a final point, these teachers believed there was a need for regular class teachers to have at least one course in special education to prepare them to recognize the needs of exceptional students.

Summary

A review of the literature related to the education of visually impaired students indicated various educational settings and programs have been considered most appropriate for the population at different times. Programs for educating blind individuals have existed longer than have those for partially sighted individuals, and were originally housed in segregated residential schools. Patterned after European systems, this format was for many years deemed the desirable type of educational facility for blind students. The first public school

class for blind students was established in the United States in the year 1900. Only gradually did blind students make the transition from special classes for the visually impaired to regular classes. The impetuses for this policy change were court decisions and legislative actions.

Classes for the education of partially sighted students were first organized in the United States in 1913. Prior to that time, no unique efforts were made to facilitate the education of students whose sight was significantly limited. An important distinction between the educational programs for partially sighted and blind students was that partially sighted students were not completely segregated from sighted students. This plan enabled partially sighted students to remain in the regular grades, yet obtain the instruction which required close eye work in special classes under the direction of teachers trained to work with exceptional students. This system resembled what is now referred to as a resource room program.

Current educational programs for visually impaired students involve the integration or mainstreaming of these students into regular classrooms. Though this form of education has existed for over 50 years, it has become much more accepted and widespread recently as the result of court decisions (Mills v. Board of Education of the District of Columbia, 1971; Pennsylvania Association for Retarded Children v. the Commonwealth of Pennsylvania, 1971) and legislation (PL 88-164; PL 89-313; PL 90-247; PL 93-380; PL 94-142), which ensure the rights of exceptional individuals to be respected. A substantial increase in the proportion of visually impaired students enrolled in local public

schools has occurred since 1949. In that year only five percent of all visually impaired students were enrolled in public schools; however, in 1977 over 70 percent were enrolled in public schools (Kirk & Gallagher, 1979).

Current programs for the education of visually impaired students consist of the following options: (1) residential school, (2) special class plan, (3) cooperative plan, and (4) integrated plan. The integrated plan, comprised of either a resource teacher or itinerant teacher, is the most recent development concerning the education of exceptional students. The unique feature of the integrated plan is that the regular classroom teacher, rather than the special educator, assumes primary responsibility for the education of the visually impaired students. The integrated plan is the educational alternative most widely implemented today.

An examination of studies, which have focused on the willingness of regular classroom teachers to integrate exceptional students whose handicaps are other than visual into their classes, indicates the majority of the teachers do not favorably view mainstreaming. When asked to decide what is the most appropriate educational placement for exceptional students, most of the teachers stated the special class plan is most desirable (Barngrover, 1971; Shotel et al., 1972). Regular class teachers as a whole, view themselves as unqualified to teach exceptional students (Glickling & Theobold, 1975; Shotel et al., 1972), and are unwilling to participate in mainstreaming programs of their own volition (Moore & Fine, 1978).

It has long been recognized that the attitudes of regular classroom teachers toward integration of exceptional students is an important factor in the success or failure of a mainstreaming effort (Dennison, 1952; Haring, et al., 1958; Pelone, 1957). In recent years, numerous studies have been conducted to identify the attitudes of regular classroom teachers concerning mainstreaming exceptional students. These studies have focused primarily on teachers' attitudes toward integration of students classified as physically handicapped, educable mentally retarded, or emotionally disturbed. The following major conclusions have been reached from investigative efforts:

1. The majority of regular classroom teachers believed special class placement was the most appropriate setting for exceptional students.
2. The majority of regular classroom teachers maintained a negative attitude toward integration of exceptional students.
3. The majority of regular classroom teachers maintained a less favorable attitude toward mainstreaming than did Directors of Special Education, special education teachers, and principals.
4. The majority of regular classroom teachers believed special methods and materials were required to educate successfully exceptional students.
5. The majority of regular classroom teachers believed one needed to have completed at least one course in special education to prepare one to meet the educational needs of exceptional students.

The present study was undertaken to determine the general attitudes of regular classroom teachers, who at the time of the study were teaching visually impaired students, toward the integration of such students. The study also aimed at identifying the services, resources, and qualifications these teachers believed were needed in order to educate more effectively visually impaired students. It was hoped this research would provide data, which would enable school administrators and support personnel to enhance their mainstreaming efforts, and would have implications for college and university personnel involved with teacher education programs.

CHAPTER III

METHODOLOGY

The present research was an investigation of the attitudes of regular classroom teachers toward mainstreaming visually impaired students. The purposes of the study were: (a) to explore the support services and educational preparation that regular classroom teachers, who were educating mainstreamed visually impaired students, believed were required in order to meet more adequately the educational needs of these students; (b) to determine the attitudes of the teachers toward visually impaired students; and (c) to formulate suggestions using the results of the data indicating where educational, administrative, and staff personnel could most profitably direct their efforts to facilitate mainstreaming such students. To achieve the purposes of the study, the investigator: (a) selected the study design, (b) identified the target population, (c) developed the data collection instrument, (d) distributed the instrument (e) analyzed the responses, and (f) offered suggestions to facilitate mainstreaming efforts.

Design

The plan for the study was the descriptive self-report design suggested by Gay (1976). In keeping with this design, information was obtained concerning the current status of regular classroom teachers' attitudes. The descriptive self-report design was directed toward

determining the nature of a situation or phenomenon as it existed at the time of the study. There was no administration or control of a treatment variable as is found in experimental research.

The aim of the design is simply to describe what exists with respect to variables or conditions in a situation. In the present study a descriptive self-report design enabled one to determine the current attitudes of regular classroom teachers who were teaching integrated visually impaired students toward: (a) mainstreaming, (b) visually impaired students, (c) responsibility for the student, (d) need for knowledge about visual impairments, (e) materials, and (f) support services.

Selection of the Target Population

The target subjects of the study were all regular classroom teachers in the Greensboro Public Schools who met the criteria that they were teaching in their classes visually impaired students of educable mentally handicapped (EMH) or higher intellectual status. Teachers involved in educating visually impaired students of less than EMH status were excluded from the study, because it was believed such a degree of mental retardation could possibly influence or confound teachers' attitudes toward visually impaired students.

The subjects were selected in the following manner. The itinerant teacher for the visually impaired students in the Greensboro Public Schools identified all visually impaired students enrolled in regular classes in the public schools. These students were enrolled at any grade level from kindergarten through senior high school. Once the

students were identified, the itinerant teacher, because of her access to school records, located those students who were classified as of normal or EMH status. She then provided a list of the regular classroom teachers who were engaged in teaching these students. The resulting group of teachers comprised the target population for the research.

The target subjects for the study comprised a population, because they included all regular classroom teachers in the Greensboro Public Schools who were teaching visually impaired mainstreamed students of EMH or higher intellectual status. There were two primary reasons why the study focused on this population. The first was that the identified group could most appropriately present the attitudes of teachers who, at the time of the study, were involved with mainstreamed visually impaired students. Were other teachers to have been incorporated in the study, their expressed attitudes would have been more representative of attitudes of past or possibly future teachers of visually impaired students. The second reason was that such teachers could comment on the services and qualifications deemed necessary at the time to meet the educational needs of mainstreamed visually impaired students.

It is recognized that the inclusion of a population in a study has certain advantages and disadvantages. The primary advantage of such a design is the strength of one's findings. The researcher can have confidence in the data collected and the conclusions reached. The weakness lies in its confinement to a single limited population at a single point in time. It is possible the information provided by such

a census may be of immediate importance to a limited group, but add little to the general body of knowledge in education. The researcher considered both points and determined the results of the present study had the potential to be of such value to the Greensboro Public School system and the visually impaired students it educates that it was worthwhile to sacrifice possible generalizability.

Among the teachers participating in the study, 15 percent taught at the elementary level, 44 percent at the junior high school level, and 41 percent at the senior high school level. The proportions were similar to those found in the population under study (15 percent at the elementary level, 45 percent at the junior high school level, and 40 percent at the senior high school level). There were many more females than males in the population, which was reflected in the percentages of each sex which completed the questionnaires. Of those who returned the questionnaires, 83.3 percent were females, and 16.7 percent were males, closely resembling the percent of females and males in the population (approximately 82 percent and 16 percent, respectively). Eighty-five percent of the respondents indicated they had previously taught visually impaired students, and 18 percent noted they had taken course work in special education.

Development of the Instrument

For the purposes of the present research, an instrument (see Appendix A) was developed by slightly modifying some of the questions asked by Cowen, Underberg, and Verillo (1958), and by DeLeo (1976). A direct adaptation of either questionnaire was not suitable, since

the studies in which they were employed were not directed toward teachers of visually impaired students. The reliability of both instruments was high and statistically significant at .01 level. The questionnaire developed by Cowen et al. (1958) yielded r = .91 when a split-half reliability was computed. DeLeo's (1976) instrument had a test-retest reliability (with an interval of one day between testing) of r = .89.

The instrument designed for the present study consisted of 25 items, was three pages in length, and was entitled "Teacher Attitude Inventory." It contained three sections: the first section concerned teachers' attitudes about various areas related to mainstreaming and visually impaired students; the second gathered demographic information on the subject completing the instrument; and the third section requested recommendations and suggestions concerning mainstreaming visually impaired students.

Section one was composed exclusively of Likert-type scales. Each item in this section was stated in concise sentence form, and was rated on a five-point scale ranging from Strongly Disagree, Disagree, Undecided, Agree, to Strongly Agree. The individual respondent was asked to mark one's opinion on each statement by placing a circle around the symbol (SD, D, U, A, SA) which best expressed one's view. This form of attitude measurement was selected for use, because its method lent itself appropriately to the purpose and nature of the study (Oppenheim, 1966). Thirty-five percent of the items were constructed in a negative direction to avoid response set. The items so constructed were the following: 3, 4, 8, 11, 17, 18, 19. These items were indicated in the subsequent tables by an asterisk.

The Likert-type scale has two major characteristics which makes it advantageous to use: (1) the universe of items is considered to be a set of items of equal attitude value, thus there is no scale of items; each item is the same as any other item in value; the respondents are scaled through use of the sums or averages of individual responses; and (2) the intensity of attitude is expressed through this summation of ratings and varying levels of agreement can be discerned; the use of five response categories necessarily allows greater variance than if only two or three categories existed (Guilford, 1954).

Items included in the questionnaire comprised six categories of interest. Items 5, 7, 14, and 16 were designed to gather information concerning the attitudes of the subject population toward support services. Items, 1, 8, and 20 focused on teachers' attitudes toward responsibility for these students; 6, 15, and 17 toward the need for special materials; 9, 10, and 13 toward the need for knowledge of visual impairments; 2, 4, 18, and 19 toward mainstreaming visually impaired students; and 3, 11, and 12 with general attitudes toward visually impaired students. Items 21 through 24 were designed to gather demographic data which previous researchers have identified as meaningful in similar type studies. The final item requested recommendations and suggestions related to the issue of mainstreaming visually impaired students.

The above categories were selected on the basis of two criteria. First, a potential category must have generated substantial interest in the field of education as evidenced in the number of pertinent professional publications and presentations. Second, it must have

significant potential to improve the education of integrated visually impaired students and to facilitate efforts to mainstream these students.

In the selection and modification of items for the Teacher Attitude Inventory, the following steps were taken:

1. A review of the literature was undertaken in order to yield a general pool of items pertinent to attitudes of regular classroom teachers toward mainstreaming visually impaired students.
2. The data collection instrument was distributed to three college level educators in the field of Special Education, and five professionals with doctorates working in higher education in the fields of Child Development, Education, or Statistics. These groups were asked to determine if the directions and items contained in the questionnaire were understandable and comprehensive.
3. The questionnaire was presented to the itinerant teacher of the visually impaired students enrolled in the Greensboro Public Schools for her suggestions and comments concerning the appropriateness of the instrument.
4. The questionnaire was presented to 16 regular classroom teachers who were not involved in educating mainstreamed visually impaired students. The intent of their consultation was to determine if the wording of the statements and directions could be easily understood and followed by the subjects.

Distribution of the Instrument

A letter (see Appendix B) was sent to each member of the target population requesting their participation and briefly explaining the purpose of the investigation. The letter was accompanied by a questionnaire, a stamped self-addressed return envelope, and a stamped self-addressed return postcard (see Appendix C). The itinerant teacher of visually impaired students enrolled in the Greensboro Public Schools distributed the materials. The respondents were requested to complete and return the questionnaires to the investigator within two weeks of their receipt of the instrument. They were further asked to return the postcard with their name on it, indicating that they voluntarily consented to participate in the research, and whether they wanted a summary report of the study sent to them.

A follow-up notice (see Appendix D) was sent to all subjects, requesting them to return the questionnaire if they had not already done so. The notice was mailed 17 days after the initial instrument distribution.

Analysis of the Responses

The collected data were keypunched on computer cards and subjected to descriptive analyses. Results were examined using descriptive statistics (means, standard deviations, and percentages). From these data generalizations about specific group attitudes were formulated. Descriptive statistical techniques were employed, because the subjects of the study were a population rather than a sample.

As a preliminary step to analyzing the data, the researcher grouped items from the attitude scale on the basis of the attitude being measured by each item. Those items which assessed attitudes toward mainstreaming were grouped, as were those dealing with attitudes toward visually impaired students, responsibility for educating visually impaired students, need for knowledge of exceptionalities in visually impaired students, materials to use with visually impaired students, and support services. Each of these clusters of items was analyzed separately.

CHAPTER IV

ANALYSIS OF THE DATA

The data analyzed in this chapter were obtained from the responses of 78 regular classroom teachers. These 78 respondents were the total number of teachers returning their questionnaires within the four-week data collection period between May 2 and May 30, 1980. Only a marginal number of questionnaires were returned after this period. Two additional questionnaires were returned, but were either not completed or only partially completed. The 78 respondents reflected an 84 percent return rate. In Table 1, the number of questionnaires sent to each grade level of educators is identified, as well as the number received by percent.

Table 1

Distribution of Respondents Sampled

Within Grade Levels

Grade Level	Number Sent	Number Returned	Percent Returned	Percent of Sample
Elementary School	14	12	86	15
Junior High School	42	34	81	44
Senior High School	37	32	86	41
Totals	93	78	84	100

For the purposes of reporting the results of the study, the chapter is divided into the following sections: Teachers' Attitudes Toward Mainstreaming Visually Impaired Students; Teachers' Attitudes Toward Visually Impaired Students; Teachers' Attitudes Toward Responsibility for Visually Impaired Students; Teachers' Attitudes Toward Need for Knowledge About Visual Impairments; Teachers' Attitudes Toward Materials Employed With Visually Impaired Students; Teachers' Attitudes Toward Support Services; and Open-Ended Responses.

Teachers' Attitudes Toward Mainstreaming Visually Impaired Students

The following section focuses on the four items of the Teacher Attitude Inventory that assessed teachers' general attitudes toward integrating students with visual impairments into regular class settings. The major finding of this portion of the study was the overall agreement among participants that visually impaired students should be mainstreamed. When the Strongly Agree and Agree responses were combined, fully 50 percent of the teachers agreed that visually impaired students should be enrolled in a regular classroom, while 24 percent were uncertain concerning appropriate placement. Fifty-seven percent of the respondents either Strongly Disagreed or Disagreed with the negative statement that visually impaired students should only be mainstreamed into non-academic school activities; 67 percent believed mainstreaming visually impaired students did not have a negative effect on the total class program; and 62 percent felt they should not be placed in a separate wing of a school building in which normal students

are taught. In Table 2, the distribution of responses on these items is further identified by providing the mean, standard deviation, and percentage of agreement-uncertainty-disagreement.

The reader should recall one purpose of the study was to indicate where educational, administrative, and supportive personnel could most profitably direct their efforts to facilitate the education of visually impaired students. To expedite this, it was decided that analysis of teachers' responses broken down by certain demographic factors would indicate if there were substantial differences in attitudes maintained by various groups of educators. The demographic variables which were determined to be most relevant were previous teaching experience with visually impaired students, grade level at which one was employed, previous course work in special education, and sex of subject. All items were further analyzed in terms of these variables.

When the four items concerning attitudes toward mainstreaming were examined in terms of whether or not subjects had previously taught visually impaired students integrated into regular classes, the results were largely the same as reported above. The majority of both groups disagreed with statements expressing the view that visually impaired students should not be mainstreamed. Of those who had previously taught visually impaired students, 64 percent disagreed they should only be integrated into non-academic activities; 64 percent disagreed their presence had a negative effect on classes; and 62 percent disagreed they should be educated in a segregated wing of a school building. Teachers who were having their first experiences

Table 2

Means, Standard Deviations, and Response Category Percentages Toward Mainstreaming Visually Impaired Students

Items	$\bar{X}$	SD	Response Category Percentages				
			SD	D	U	A	SA
2. Visually impaired students should be enrolled in a regular classroom.	3.2	1.08	8.9	16.7	24.4	43.6	6.4
4. Visually impaired students should only be mainstreamed into non-academic school activities (assemblies, lunch programs, recess, etc.).	3.7*	1.00	18.0	48.7	15.3	16.7	1.3
18. Placing visually impaired students in regular classes has a negative effect on the entire class program.	3.8*	0.95	21.8	44.9	21.8	10.2	1.3
19. Visually impaired students should be placed in a school building with normal students, but should be in a special wing which serves only exceptional students.	3.7*	0.97	20.5	41.0	25.6	11.6	1.3

*Item reverse scored.

with mainstreamed visually impaired students disagreed with these three statements even more frequently. Percentages of disagreement responses indicated by the first experience teachers were 83 percent, 83 percent, and 58 percent for the respective items.

The most profound difference in the groups' responses concerned the positively worded statement that visually impaired students should be enrolled in a regular classroom environment. Of the teachers with previous experience, 50 percent agreed with this statement, while 29 percent were uncertain. Responses of teachers who had not previously taught visually impaired students indicated 50 percent were uncertain and 50 percent disagreed. None of the educators who had not previously taught visually impaired students agreed with the direct statement that such students should be mainstreamed (see Table 3).

Analysis of the data in terms of the grade level at which the regular teacher was currently employed yielded no substantial differences in teachers' attitudes. Elementary school teachers expressed the most support for integration of visually impaired students, followed by senior high school teachers. Junior high school teachers, though still supportive, were more frequently negative or uncertain with regard to these issues. Seventy-five percent of the elementary school teachers agreed visually impaired students should be enrolled in regular classes. The percent agreement for senior and junior high school teachers were 53 percent and 38 percent, respectively. One hundred percent of the elementary teachers disagreed with the statement that visually impaired students should only be mainstreamed into non-academic activities (see Table 4). Sixty-three percent of the

Table 3

Means, Standard Deviations, and Response Category Percentages Toward Mainstreaming Visually Impaired Students by Previous Teaching

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
2. Visually impaired students should be enrolled in a regular classroom environment.	1	3.3	1.07	9.1	12.1	28.8	42.4	7.6
	2	2.9	1.16	8.3	41.7	50.0	0.0	0.0
4. Visually impaired students should only be mainstreamed into non-academic school activities (assemblies, lunch programs, recess, etc.).	1	3.6*	1.02	18.2	45.4	18.2	16.7	1.5
	2	3.8	0.94	16.7	66.7	0.0	16.7	0.0
18. Placing visually impaired students in regular classes has a negative effect on the entire class program	1	3.7*	1.00	22.7	41.0	22.7	12.1	1.5
	2	4.0	0.60	16.7	66.7	16.7	0.0	0.0
19. Visually impaired students should be placed in a school building with normal students, but should be in a special wing which serves only exceptional students.	1	3.7*	0.95	18.2	43.9	25.8	10.6	1.5
	2	3.8	1.14	33.3	25.0	25.0	16.7	0.0

*Item reverse scored.

[+]Group 1 refers to participants who had previously taught visually impaired students. Group 2 refers to participants who had not previously taught visually impaired students.

Table 4

Means, Standard Deviations, and Response Category

Percentages Toward Mainstreaming Visually

Impaired Students by Grade Level Teaching

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
2. Visually impaired students should be enrolled in a regular classroom environment.	1	3.9	0.90	0.0	8.3	16.7	50.0	25.0
	2	2.9	1.04	11.8	20.6	29.4	38.2	0.0
	3	3.3	1.10	9.4	15.6	21.9	46.9	6.2
4. Visually impaired students should only be mainstreamed into non-academic school activities (assemblies, lunch programs, recess, etc.).	1	4.3*	0.49	33.3	66.7	0.0	0.0	0.0
	2	3.4	1.07	11.8	47.1	14.7	23.5	2.9
	3	3.7	0.97	18.7	43.8	21.9	15.6	0.0
18. Placing visually impaired students in regular classes has a negative effect on the entire class program.	1	4.3*	0.77	50.0	33.3	16.7	0.0	0.0
	2	3.7	0.90	20.6	38.2	32.4	8.8	0.0
	3	3.6	1.01	12.5	56.3	12.5	15.6	3.1
19. Visually impaired students should be placed in a school building with normal students, but should be in a special wing which serves only exceptional students.	1	4.3*	0.75	41.7	41.7	16.7	0.0	0.0
	2	3.5	1.08	20.6	32.3	29.4	14.7	3.0
	3	3.6	0.87	12.5	50.0	25.0	12.5	0.0

*Item reverse scored.

[+]Group 1 refers to Elementary School teachers. Group 2 refers to Junior High School teachers. Group 3 refers to Senior High School teachers.

senior high school teachers and 60 percent of the junior high school teachers shared the views of the elementary teachers.

Additional evidence of the similarity of views and the negative view toward not integrating these students was the high percentage of disagreement responses which were expressed toward the statement that regular class placement of visually impaired students had a negative effect on classes. Eighty-three percent of the elementary teachers disagreed with this as did 69 percent of the senior high teachers and 59 percent of the junior high teachers. In reaction to the item which stated visually impaired students should be educated in a separate wing, 83 percent of the elementary teachers disagreed. Their views were shared by 63 percent of the senior high school teachers and 53 percent of the junior high school teachers. In Table 4 these distributions can be more readily identified.

As part of the investigation, it was of interest whether a teacher's having taken course work in special education would be associated in some way with attitudes expressed regarding visually impaired students and areas related to their education. As such, this factor was chosen as one by which teachers could be grouped. Analysis of teachers' responses in the framework of this variable yielded very similar expressions of attitudes concerning mainstreaming visually impaired students.

It is of interest that though 50 percent of both groups agreed with the statement visually impaired students should be enrolled in regular classes, more of those who had not had a special education course disagreed with this (28 percent) than did those who had taken

such a course (14 percent). There was high similarity in the expressed attitudes of these groups pertaining to the statements visually impaired students should only be mainstreamed into non-academic activities and these students have a negative effect on regular class programs. Seventy-one percent of those with previous special education course work, and 66 percent of those without, disagreed with both items. Though both groups of educators disagreed that visually impaired students should be educated in a special wing which serves only exceptional students, teachers who had taken special education course work more frequently disagreed (79 percent to 58 percent), and expressed less uncertainty on this item (7 percent to 30 percent). These differences can be seen clearly in Table 5.

A final factor which was used to group subjects was sex of the respondent. Analysis of data in terms of sex provided overall consistency in the majority of the responses yet offered some noticeable discrepancies in response frequencies. The most obvious difference in expressed attitudes concerning mainstreaming visually impaired students occurred in response to the statement these students should be enrolled in a regular classroom environment. It was found that only 43 percent of the female educators agreed with this, as compared to 84 percent of the male educators. Also of note concerning this item was that none of the males disagreed with the statement, while 31 percent of the females did disagree (see Table 6).

When confronted with the statement that visually impaired students should only be mainstreamed into non-academic activities, 66 percent of the females and 69 percent of the males disagreed with this.

Table 5

Means, Standard Deviations, and Response Category

Percentages Toward Mainstreaming Visually

Impaired Students by Course Work

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
2. Visually impaired students should be enrolled in a regular classroom environment.	1	3.4	1.09	7.1	7.1	35.7	35.7	14.4
	2	3.2	1.09	9.4	18.8	21.9	45.3	4.6
4. Visually impaired students should only be mainstreamed into non-academic program activities (assemblies, lunch programs, recess, etc.).	1	3.9*	1.23	35.7	35.7	14.4	7.1	7.1
	2	3.6	0.95	14.1	51.6	15.6	18.7	0.0
18. Placing visually impaired students in regular classes has a negative effect on the entire class program.	1	4.1*	0.86	42.9	28.5	28.5	0.0	0.0
	2	3.7	0.96	17.2	48.4	20.3	12.5	1.6
19. Visually impaired students should be placed in a school building with normal students, but should be in a special which serves only exceptional students.	1	4.1*	1.29	57.2	21.5	7.1	7.1	7.1
	2	3.6	0.87	12.5	45.3	29.7	12.5	0.0

*Item reverse scored.

[+]Group 1 refers to participants who had taken course work in special education.
Group 2 refers to participants who had not taken course work in special education.

Table 6

Means, Standard Deviations, and Response Category

Percentages Toward Mainstreaming Visually

Impaired Students by Sex

Items	Group+	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
2. Visually impaired students should be enrolled in a regular classroom environment.	1	3.1	1.12	10.8	20.0	26.1	36.9	6.2
	2	3.9	0.49	0.0	0.0	15.4	76.9	7.7
4. Visually impaired students should only be mainstreamed into non-academic school activities (assemblies, lunch programs, recess, etc.).	1	3.6*	1.04	16.9	49.2	12.3	20.0	1.6
	2	3.9	0.76	23.1	46.2	30.7	0.0	0.0
18. Placing visually impaired students in regular classes has a negative effect on the entire class program.	1	3.8*	0.92	26.2	41.5	23.1	9.2	0.0
	2	3.3	1.03	0.0	61.5	15.4	15.4	7.7
19. Visually impaired students should be placed in a school building with normal students, but should be in a special wing which serves only exceptional students.	1	3.6*	0.99	18.5	40.0	26.2	13.8	1.5
	2	4.1	0.76	30.8	46.2	23.0	0.0	0.0

*Item reverse scored.

+Group 1 refers to female participants. Group 2 refers to male participants.

Further examination of the responses showed that though none of the males agreed with this statement, 21 percent of the females did. The statement which proposed regular class placement of visually impaired students had a negative effect on class programs also was responded to somewhat differently by males and females. Sixty-eight percent of the females opposed this as did 62 percent of the males. It was additionally found, however, that approximately nine percent of the females concurred with the statement as compared to 23 percent of the males. Analysis of teachers' responses to the statement that visually impaired students should be educated in a separate wing of a school building indicated the majority of both female and male teachers disagreed with this view (59 percent and 77 percent, respectively). None of the males agreed with this statement, while 15 percent of the female participants did (see Table 6)

Teachers' Attitudes Toward Visually Impaired Students

Realizing favorable attitudes of regular classroom teachers toward visually impaired students is essential if students are to be successfully integrated into the regular classroom for even a part of the school day, three questions were directed to assessing general attitudes toward such students. Sixty-seven percent of the teachers polled stated they disagreed with the idea that normally sighted students seem more intelligent than those who are visually impaired. There was less concordance among teachers concerning whether the conditions of visually impaired students necessitated their meeting different standards in the regular classroom. Forty-nine percent agreed

such students should meet different standards, 15 percent were uncertain, and 36 percent believed the students should meet the same standards as their sighted peers. When asked to respond to the statement that a teacher should expect age appropriate behavior from visually impaired students, 77 percent agreed while six percent disagreed. For further description of these items, the reader is referred to Table 7.

Examination of teachers' responses with regard to demographic variables provided additional understanding of specific groups' general attitudes toward visually impaired students. Of the teachers who had previously taught visually impaired students, 73 percent felt the students were not less intelligent than students with normal vision. In contrast, only 33 percent of the teachers who were working with visually impaired students for the first time expressed similar views. For this item, approximately 67 percent of the educators without prior work with visually impaired students were uncertain as to how these students compared intellectually to their normally sighted classmates. Both groups of educators overwhelmingly agreed age appropriate behavior should be expected from visually impaired students. Teachers with prior experience indicated an agreement of 79 percent, while the other educators showed 67 percent agreement (see Table 8).

An understanding of the attitudes of various grade level teachers is important if results are to suggest actions which can be taken to improve the education of visually impaired students. To accomplish this, data were considered in relation to whether respondents taught at elementary, junior high, or senior high school levels. A study of

Table 7

Means, Standard Deviations, and Response Category Percentages Toward Mainstreaming Visually Impaired Students

Items	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
3. On the whole, normally sighted students seem to be more intelligent than visually impaired students.	3.9*	0.85	27.0	39.7	29.5	3.8	0.0
11. The specialized problems of visually impaired students necessitates their meeting different standards in the regular classroom.	2.9	1.14	9.0	27.0	15.3	42.3	6.4
12. One should expect age appropriate behavior from visually impaired students.	3.9	0.79	0.0	6.4	16.7	56.4	20.5

*Item reverse scored.

Table 8

Means, Standard Deviations, and Response Category

Percentages Toward Visually Impaired Students

By Previous Teaching

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
3. On the whole, normally sighted students seem to be more intelligent than visually impaired students	1	4.0*	0.84	28.8	44.0	22.7	4.5	0.0
	2	3.5	0.80	16.7	16.7	66.7	0.0	0.0
11. The specialized problems of visually impaired students necessitate their meeting different standards in the regular classroom	1	3.0*	1.14	9.1	28.8	18.2	37.8	6.1
	2	2.5	1.17	8.3	16.7	0.0	66.7	8.3
12. One should expect age appropriate behavior from visually impaired students.	1	4.0	0.76	0.0	6.0	15.2	60.6	18.2
	2	3.9	0.99	0.0	8.3	25.0	33.3	33.3

*Item reverse scored.

[+]Group 1 refers to participants who had previously taught visually impaired students.
Group 2 refers to participants who had not previously taught visually impaired students.

attitudes expressed concerning the notion sighted students are more intelligent than visually impaired students showed that though all three groups disagreed with this view, they did so at fairly different rates of frequency. The percent of disagree responses noted were 72 percent by senior high teachers, 65 percent by junior high teachers, and 58 percent by elementary teachers. Additionally, 17 percent of the elementary teachers and three percent of the junior high teachers agreed normally sighted students are more intelligent than those who are visually impaired. None of the senior high teachers maintained this position (see Table 9).

Differences in rates of response frequencies were found with respect to whether visually impaired students should meet different standards in the classroom. Thirty-three percent of the elementary teachers felt visually impaired students should meet different standards. This view was shared by 50 percent of the junior high teachers, and 53 percent of the senior high teachers.

All three groups largely agreed with the proposal that one should expect age appropriate behavior from visually impaired students. Their frequencies of agree responses were: elementary teachers, 83 percent; junior high teachers, 73 percent; and senior high teachers, 78 percent. The above items are all further described in Table 9.

A review of the data in terms of whether a subject has taken course work in the area of special education produced few noticeable differences in expressed general attitudes toward visually impaired students. Both groups expressed disagreement with the statement that normally sighted students are more intelligent than visually

Table 9

Means, Standard Deviations, and Response Category

Percentages Toward Visually Impaired Students

Items by Grade Level Teaching

Items	Group+	$\bar{X}$	SD	Response Category Percentages				
				SD	D	U	A	SA
3. On the whole, normally sighted students seem to be more intelligent than visually impaired students.	1	3.8*	1.13	33.3	25.0	25.0	16.7	0.0
	2	3.9	0.82	23.5	41.2	32.4	2.9	0.0
	3	4.0	0.76	28.1	43.8	28.1	0.0	0.0
11. The specialized problems of visually impaired students necessitate their meeting different standards in the regular classroom.	1	3.0*	0.90	0.0	41.7	25.0	33.3	0.0
	2	2.8	1.15	8.8	20.6	20.6	41.2	8.8
	3	2.9	1.24	12.5	28.1	6.3	46.8	6.3
12. One should expect age appropriate behavior from visually impaired students	1	3.9	0.79	0.0	8.3	8.3	66.7	16.7
	2	3.8	0.92	0.0	11.8	14.7	50.0	23.5
	3	3.9	0.64	0.0	0.0	21.9	59.4	18.7

*Item reverse scored.

+Group 1 refers to Elementary School teachers.
Group 2 refers to Junior High School teachers.
Group 3 refers to Senior High School teachers.

impaired students. Seventy-one percent of those with special education course work disagreed with the statement, and none agreed with it. Of those teachers who had not enrolled in a special education course at some time, 65 percent disagreed, and five percent agreed with this position. Responses to the position that visually impaired students must meet different standards in the regular classroom were fairly similar between groups. Forty-three percent of the teachers with course work in special education agreed with this statement, while 36 percent disagreed. Of the other teachers, 50 percent agreed and 36 percent disagreed. On the final item, assessing general attitudes, 93 percent of the teachers with prior course work felt one should expect age appropriate behavior from visually impaired students. Teachers without prior course work were somewhat less decided on this as 73 percent agreed and 19 percent indicated they were uncertain. These items are described in Table 10.

Males and females showed few differences in expressed general attitudes toward visually impaired students. Sixty-nine percent of the males and 66 percent of the females disagreed that normally sighted students seem more intelligent than those who are visually impaired. More substantial differences in their attitudes were demonstrated in their responses to whether visually impaired students need to meet different academic standards because of their specialized problems. Fifty-one percent of the female teachers agreed with this position and 34 percent disagreed. Male subjects produced a 39 percent agreement rate, and a 46 percent disagreement rate. Approximately 15 percent in each group were uncertain about their stance.

Table 10

Means, Standard Deviations, and Response Category Percentages Toward Visually Impaired Students By Course Work

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
3. On the whole, normally sighted students seem to be more intelligent than visually impaired students.	1	4.2	0.89	50.0	21.4	28.6	0.0	0.0
	2	3.8	0.83	21.8	43.8	29.7	4.7	0.0
11. The specialized problems of visually impaired students necessitate their meeting different standards in the regular classroom.	1	2.9*	0.92	0.0	35.7	21.4	42.9	0.0
	2	2.9	1.20	11.0	25.0	14.1	42.1	7.8
12. One should expect age appropriate behavior from visually impaired students.	1	4.2	0.58	0.0	0.0	7.1	64.3	28.6
	2	3.8	0.82	0.0	7.8	18.8	54.6	18.8

*Item reverse scored.

[+]Group 1 refers to participants who had taken course work in special education. Group 2 refers to participants who had not taken course work in special education.

Males and females agreed overwhelmingly that one should expect age appropriate behavior from visually impaired students. Male teachers indicated agreement with this view more frequently than did females, 85 percent and 75 percent, respectively (see Table 11).

Teachers' Attitudes Toward Responsibility For Visually Impaired Students

In order to further assess the attitudes of regular classroom teachers with regard to the education of visually impaired students, it was believed acquisition of data concerning who teachers believed should be responsible for serving these students would be informative. To gather such data, three items focusing on this issue were included in the data collection instrument. Analysis of the items is presented in this section.

The first item the subjects were presented pertained to whom they believed visually impaired students should first turn for academic assistance. The majority (56 percent) agreed visually impaired students should first consult the regular teacher when in need of help. Twelve percent were not sure, while 32 percent disagreed that the regular teacher should be the first person consulted. When offered the proposal that itinerant teachers should have primary responsibility for educating mainstreamed visually impaired students, 47 percent of the respondents disagreed, 22 percent were uncertain, and 31 percent agreed. The statement that regular class teachers are as responsible for visually impaired students as the support staff, resulted in over two-thirds of the teachers (69 percent) asserting

Table 11

Means, Standard Deviations, and Response Category Percentages Toward Visually Impaired Students By Sex

Items	Group+	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
3. On the whole, normally sighted students seem to be more intelligent than visually impaired students.	1	3.9*	0.87	29.2	36.9	29.2	4.7	0.0
	2	3.8	0.69	15.4	53.9	30.7	0.0	0.0
11. The specialized problems of visually impaired students necessitate their meeting different standards in the regular classroom.	1	2.8*	1.12	7.7	26.1	15.4	44.6	6.2
	2	3.2	1.28	15.4	30.8	15.4	30.8	7.7
12. One should expect age appropriate behavior from visually impaired students.	1	3.9	0.77	0.0	6.2	18.5	58.5	16.8
	2	4.2	0.90	0.0	7.7	7.7	46.1	38.5

*Item reverse scored.

+Group 1 refers to female participants.
Group 2 refers to male participants.

they are as responsible, and 13 percent disagreeing with this view (see Table 12).

Inspection of the expressed attitudes in terms of whether one had previous teaching experience with visually impaired students provided evidence of slight differences between groups. A clear example occurred in response to the statement that visually impaired students should seek assistance from regular class teachers before consulting resource personnel. Fifty-nine percent of those who had previously taught such students agreed with this view; however, an almost equal percent of those who were teaching visually impaired students for the first time (58 percent) disagreed with the statement. It is of interest that while approximately 14 percent of the former group were uncertain on this issue, none of the latter group were (see Table 13).

In reply to whether support personnel should have primary responsibility for educating visually impaired students, a plurality of both groups disagreed with this contention. Forty-eight percent of those with prior experience and 42 percent of those without this type of experience indicated the itinerant teacher should not have this responsibility. In response to the assertion that the regular classroom teacher is as responsible for visually impaired students as the support staff, almost three out of four respondents who had previously taught such students (73 percent) agreed this is true, as did 50 percent of the other educators. The above items are further described in Table 13.

Table 12

Means, Standard Deviations, and Response Category Percentages Toward Responsibility For Visually Impaired Students

Items	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
1. Visually impaired students should first turn to regular classroom teachers for academic assistance rather than to supportive staff.	3.2	1.11	9.0	23.1	11.5	52.6	3.8
8. The Itinerant/resource teacher should have primary responsibility for the education of mainstreamed visually impaired students.	3.0*	1.12	3.8	43.6	21.8	19.3	11.5
20. The regular classroom teacher is as responsible for the visually impaired as the support staff.	3.7	0.88	1.3	11.5	18.0	57.7	11.5

*Item reverse scored.

Table 13

Means, Standard Deviations, and Response Category Percentages Toward Responsibility for Visually Impaired Students By Previous Teaching

Items	Group+	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
1. Visually impaired students should first turn to regular classroom teachers for academic assistance rather than to supportive staff.	1	3.3	1.10	9.1	18.2	13.7	54.5	4.5
	2	2.8	1.14	8.3	50.0	0.0	41.7	0.0
8. The itinerant/resource teacher should have primary responsibility for the education of mainstreamed visually impaired students	1	3.1*	1.09	4.5	44.0	21.2	21.2	9.1
	2	2.8	1.27	0.0	41.7	25.0	8.3	25.0
20. The regular classroom teacher is as responsible for the visually impaired student as the support staff.	1	3.7	0.86	1.5	10.6	15.2	62.1	10.6
	2	3.5	1.00	0.0	16.7	33.3	33.3	16.7

*Item reverse scored.

+Group 1 refers to participants who had previously taught visually impaired students. Group 2 refers to participants who had not previously taught visually impaired students.

Review of responses as broken down by grade level at which subjects were teaching indicated teachers basically shared the same attitudes regardless of their teaching positions. The majority of teachers at each level (73 percent of elementary, and 53 percent of both junior and senior high school teachers) agreed visually impaired students should consult regular class teachers before seeking assistance from support personnel. The percentage of respondents disagreeing with the position that support personnel should have primary responsibility for educating mainstreamed visually impaired students consistently decreased from elementary to senior high school. It was found that 67 percent of the elementary teachers disagreed with the above statement as did 50 percent of the junior high and 38 percent of the senior high school teachers. The greatest amount of uncertainty was at the senior high school level where over a quarter of the teachers (28 percent) indicated they were not decided on this point. All three groups again concurred in a similar pattern regarding the stance that regular classroom teachers are as responsible for visually impaired students as the support staff. Eighty-three percent of the elementary teachers, 77 percent of the junior high teachers, and 56 percent of the senior high teachers agreed this is true (see Table 14).

Analysis of data, after blocking on the basis of whether a teacher had taken course work in the area of special education, presented some fairly clear differences in response frequency percentages between groups. Of the teachers with such course work, 43 percent agreed visually impaired students should first consult regular

Table 14

Means, Standard Deviations, and Response Category Percentages Toward Responsibility for Visually Impaired Students By Grade Level Teaching

Items	Group+	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
1. Visually impaired students should first turn to regular classroom teachers for academic assistance rather than to supportive staff.	1	3.7	0.64	0.0	8.3	16.7	75.0	0.0
	2	3.0	1.11	8.8	32.4	5.9	52.9	0.0
	3	3.2	1.23	12.5	18.7	15.6	43.8	9.4
8. The itinerant/resource teacher should have primary responsibility for the education of mainstreamed visually impaired students.	1	3.4*	0.99	0.0	66.7	16.7	8.3	8.3
	2	3.1	1.17	5.9	44.1	17.6	20.6	11.8
	3	2.9	1.10	3.1	34.4	28.1	21.9	12.5
20. The regular classroom teacher is as responsible for the visually impaired student as the support staff.	1	4.3	0.75	0.0	0.0	16.7	41.7	41.7
	2	3.6	0.77	0.0	14.7	8.8	73.5	3.0
	3	3.5	0.95	3.1	12.5	28.1	46.9	9.4

*Item reverse scored.

+Group 1 refers to Elementary School teachers.
Group 2 refers to Junior High School teachers.
Group 3 refers to Senior High School teachers.

class teachers for assistance. This was in comparison to 59 percent of the teachers without such schooling who agreed with the statement. The disagreement rate for both groups was approximately one-third (36 percent of those with special education course work, and 21 percent of those without); thus, the frequency of uncertainty responses was a key difference. Approximately 20 percent of the former group were not sure concerning this item, whereas only 10 percent of the latter group expressed indecision (see Table 15).

A greater percentage of teachers with special education course work felt itinerant teachers should not have primary responsibility for educating mainstreamed visually impaired students (57 percent), than did teachers without course work (45 percent). Both groups possessed about equal percentages of subjects who were uncertain on this item (21 percent and 22 percent, respectively). Despite the fact that in comparison to teachers without special education courses a larger percentage of those who had taken such courses believed support personnel should not have the majority of the responsibility for educating visually impaired students, a smaller percentage of them believed the regular classroom teacher actually was as responsible for these students. Seventy-two percent of the teachers without the course work agreed regular class teachers are as responsible, but only 57 percent of those who had taken special education course work held this view (see Table 15).

Examination of responses in terms of the sex of the teachers was the final analysis to which these items were subjected. There was much concordance in the attitudes expressed by all subjects

Table 15

Means, Standard Deviations, and Response Category Percentages Toward Responsibility for Visually Impaired Students By Course Work

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
1. Visually impaired students should first turn to regular classroom teachers for academic assistance rather than to supportive staff.	1	3.0	1.04	7.1	28.6	21.4	42.9	0.0
	2	3.2	1.14	9.4	21.9	9.4	54.7	4.6
8. The itinerant/resource teacher should have primary responsibility for the education of mainstreamed visually impaired students.	1	3.2*	1.12	0.0	57.1	21.4	7.1	14.4
	2	3.1	1.12	4.6	40.6	21.9	21.9	11.0
20. The regular classroom teacher is as responsible for the visually impaired student as the support staff.	1	3.8	1.25	0.0	21.4	21.4	14.3	42.9
	2	3.6	0.78	1.6	9.4	17.2	67.2	4.6

*Item reverse scored.

[+]Group 1 refers to participants who had taken course work in special education.
Group 2 refers to participants who had not taken course work in special education.

concerning who visually impaired students should first consult for academic assistance. Fifty-seven percent of the female teachers, and 54 percent of the male teachers agreed visually impaired students should first seek assistance from the regular class teacher (see Table 16).

Somewhat greater discrepancies in rates of responses were noted on the other items pertaining to teachers' attitudes toward responsibility for visually impaired students. It was found that though 46 percent of the females and 54 percent of the males disagreed with the statement that support personnel should have primary responsibility for educating mainstreamed visually impaired students, there was a much larger difference in their percentages of agreed responses to this statement. Thirty-seven percent of the female respondents felt the itinerant teacher should be most responsible, but none of the males indicated they felt this way (see Table 16).

Differences were again noted in male and female teachers' attitudes associated with the proposition that the classroom teacher is as responsible for the visually impaired student as the support staff. The majority of both sexes agreed with the statement (68 percent of the females, and 77 percent of the males), yet a higher percent of the female respondents disagreed with the item. Fifteen percent of the female subjects disagreed that the classroom teacher is as responsible, but none of the male subjects did. For further explication of this, see Table 16.

Table 16

Means, Standard Deviations, and Response Category Percentages Toward Responsibility for Visually Impaired Students by Sex

Items	Group+	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
1. Visually impaired students should first turn to regular classroom teachers for academic assistance rather than to supportive staff.	1	3.2	1.14	9.2	26.2	7.7	53.8	3.1
	2	3.4	1.04	7.7	7.7	30.8	46.1	7.7
8. The itinerant/resource teacher should have primary responsibility for the education of mainstreamed visually impaired students.	1	3.0*	1.17	3.1	43.1	16.9	23.1	13.8
	2	3.6	0.65	7.7	46.2	46.2	0.0	0.0
20. The regular classroom teacher is as responsible for the visually impaired student as the support staff.	1	3.6	0.94	1.6	13.8	16.9	53.9	13.8
	2	3.8	0.44	0.0	0.0	23.1	76.9	0.0

*Item reverse scored.

+Group 1 refers to female participants.
Group 2 refers to male participants.

Teachers' Attitudes Toward the Need For Knowledge About Visual Impairments

Professionals involved in curriculum development and those concerned with the continuing career growth of classroom educators are interested in determining what skills and knowledge teachers need in order to educate students. It is believed one of the most appropriate sources of this information is regular class teachers who work on a day-to-day basis in the classrooms. As the present study focused entirely on teachers' attitudes related to the education of visually impaired students, statements were constructed to assess teachers' attitudes toward the need to be knowledgeable about conditions of visual impairments. To sample these attitudes, three items were developed pertaining to the formal preparation of regular teachers to work with visually impaired students.

The statement that one college level course in special education is adequate preparation for regular classroom teachers who are involved in educating mainstreamed visually impaired students met with large disagreement by the participants. Almost two out of three teachers (63 percent) expressed the attitude one class of this type was not adequate preparation. Though nine percent agreed one class was sufficient, over a quarter (28 percent) were uncertain. In response to the position that inservice training and workshop programs related to visual impairments should be offered to regular class teachers, 91 percent of the teachers agreed, and four percent were uncertain. Concerning whether all teachers should be required to

take at least one course in special education as part of their teaching preparation program, a full 78 percent of the subjects expressed agreement, while 14 percent disagreed (see Table 17).

Teachers who had not previously taught visually impaired students more frequently expressed attitudes indicating they favored course work and inservice training dealing with visual impairments than did their counterparts, who had previously taught such students. Nearly an equal percentage of both groups disagreed with the contention that one course in special education was adequate preparation for working with mainstreamed visually impaired students (64 percent of those with prior experience, and 60 percent of those without this experience). Expressed attitudes associated with inservice programs for teachers of integrated visually impaired students indicated all of the teachers who had not previously taught visually impaired students believed such programs should be offered. Eighty-nine percent of the group with experience also concurred. It was further demonstrated both groups believed all prospective teachers should be required to take at least one course in special education. Again, educators without prior experience teaching visually impaired students more frequently expressed agreement, 83 percent of this group as compared to 77 percent of the other group (see Table 18).

Breakdown of the data by grade level at which subjects were taught produced some noteworthy differences in the frequency of attitudes expressed. Junior high school teachers were the most certain of their attitudes, while senior high school teachers were the least certain. As evidence, the fact remained that though a plurality of

Table 17

Means, Standard Deviations, and Response Category Percentages Toward Need for Knowledge About Visual Impairments

Items	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
9. One college level course in special education is adequate preparation for teachers having visually impaired students in their regular classes.	2.1	0.99	29.5	33.3	28.2	7.7	1.3
10. Inservice training and workshop programs related to visual impairments should be offered to regular class teachers of visually impaired students.	4.3	0.87	2.6	2.6	3.8	42.3	48.7
13. All teachers should be required to take at least one course in special education during their teaching preparation program.	3.9	1.07	3.8	10.3	7.7	47.4	30.8

Table 18

Means, Standard Deviations, and Response Category Percentages Toward Need for Knowledge About Visual Impairment By Previous Teaching

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
9. One college level course in special education is adequate preparation for teachers having visually impaired students in their regular classes.	1	2.2	0.98	30.3	33.3	28.8	6.1	1.5
	2	2.3	1.07	25.0	33.3	25.0	16.7	0.0
10. Inservice training and workshop programs related to visual impairments should be offered to regular class teachers of visually impaired students.	1	4.3	0.93	3.0	3.0	4.6	39.4	50.0
	2	4.4	0.51	0.0	0.0	0.0	58.3	41.7
13. All teachers should be required to take at least one course in special education during their teacher preparation program.	1	3.9	1.01	1.5	12.1	9.1	47.0	30.3
	2	3.8	1.40	16.7	0.0	0.0	50.0	33.3

[+]Group 1 refers to participants who had previously taught visually impaired students.
Group 2 refers to participants who had not previously taught visually impaired students.

each group indicated disagreement with the statement that one course in special education would be adequate preparation for teaching visually impaired students, 12 percent of the junior high school teachers, 25 percent of the elementary school teachers, and 47 percent of the senior high school teachers were uncertain. As further support of this statement, it was found that 100 percent of the elementary and junior high school teachers believed inservice training and workshop programs should be offered, but nine percent of the senior high school teachers were not sure such programs should be offered. As to whether teachers should be required to take special education course work as part of their preparation, 83 percent of the elementary teachers, 85 percent of the junior high teachers, and 69 percent of the senior high teachers agreed such work should be required. Twenty-two percent of the senior high teachers disagreed with this point, and nine percent were uncertain (see Table 19).

Both educators who had taken course work in special education and those who had not largely concurred in their expressed attitudes related to the need for knowledge about visual impairments. Fifty-seven percent of the teachers who had taken a course in special education disagreed with the view that one such course is adequate preparation. Sixty-four percent of those who had not taken this type of course also disagreed. It was more significant, however, to note that of the former group, 35 percent agreed one special education course is adequate, while only three percent of the latter group did. An overwhelming percentage of both groups agreed inservice programs should be offered (93 percent of those with special education course

Table 19

Means, Standard Deviations, and Response Category Percentages Toward Need for Knowledge About Visual Impairments by Grade Level Teaching

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
9. One college level course in special education is adequate preparation for teachers having visually impaired students in their regular classes.	1	2.9	1.16	8.3	33.3	25.0	25.0	8.3
	2	1.8	0.76	38.2	47.0	11.8	3.0	0.0
	3	2.3	0.97	28.1	18.7	46.9	6.3	0.0
10. Inservice training and workshop programs related to visual impairments should be offered to regular class teachers of visually impaired students.	1	4.6	0.51	0.0	0.0	0.0	41.7	58.3
	2	4.6	0.50	0.0	0.0	0.0	41.7	55.9
	3	4.0	1.14	6.3	6.3	9.4	40.6	37.4
13. All teachers should be required to take at least one course in special education during their teacher preparation program.	1	3.9	1.44	16.7	0.0	0.0	41.7	41.7
	2	4.2	0.84	0.0	5.9	8.8	44.1	41.2
	3	3.6	1.07	3.1	18.8	9.4	53.1	15.6

[+]Group 1 refers to Elementary School teachers.
Group 2 refers to Junior High School teachers.
Group 3 refers to Senior High School teachers.

work, and 91 percent of those without the course work), and prospective teachers should be required to take at least one course in special education (71 percent and 80 percent, respectively). In Table 20, the distribution of responses on these items is further identified.

Analysis of attitudes in terms of sex of the participants yielded little difference in rates of responses. The most substantial variations in responses occurred to the proposal that one course in special education is adequate preparation for regular classroom teachers having visually impaired students in their classes. Sixty-five percent of the female teachers disagreed, 25 percent were uncertain, and 11 percent agreed with this statement. In contrast, 54 percent of the male teachers disagreed, 46 percent were uncertain, and none agreed that one class is adequate preparation. Rates of concordance were much greater on the other items. Ninety-one percent of the females and 92 percent of the males agreed inservice programs should be offered, and 78 percent of the females and 77 percent of the males believed teachers should be required to take at least one course in special education during their teacher preparation program (see Table 21).

Teachers' Attitudes Toward Materials Employed With Visually Impaired Students

It is important that appropriate educational materials be available for educators to use with all students. It is perhaps even more important that teaching resources be accessible to personnel

Table 20

Means, Standard Deviations, and Response Category Percentages Toward Need for Knowledge About Visual Impairments by Course Work

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
9. One college level course in special education is adequate preparation for teachers having visually impaired students in their regular classes.	1	2.6	1.40	28.6	28.6	7.1	28.6	7.1
	2	2.1	0.87	29.7	34.3	32.8	3.2	0.0
10. Inservice training and workshop programs related to visual impairments should be offered to regular class teachers of visually impaired students.	1	4.4	0.63	0.0	0.0	7.1	50.0	42.9
	2	4.3	0.92	3.1	3.1	3.1	40.7	50.0
13. All teachers should be required to take at least one course in special education during their teacher preparation program.	1	3.9	1.61	14.3	14.3	0.0	14.3	57.1
	2	3.9	0.93	1.6	9.4	9.4	54.6	25.0

[+]Group 1 refers to participants who had taken course work in special education.
Group 2 refers to participants who had not taken course work in special education.

Table 21

Means, Standard Deviations, and Response Category Percentages Toward Need for Knowledge About Visual Impairments by Sex

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
9. One college level course in special education is adequate preparation for teachers having visually impaired students in their regular classes.	1	2.2	1.02	30.8	33.8	24.6	9.2	1.6
	2	2.2	0.83	23.1	30.7	46.2	0.0	0.0
10. Inservice training and workshop programs related to visual impairments should be offered to regular class teachers of visually impaired students.	1	4.3	0.91	3.1	3.1	3.1	43.1	47.6
	2	4.5	0.66	0.0	0.0	7.7	38.5	53.8
13. All teachers should be required to take at least one course in special education during their teacher preparation program.	1	3.9	1.12	4.6	10.8	6.2	44.6	33.8
	2	3.8	0.80	0.0	7.7	15.4	61.5	15.4

[+]Group 1 refers to female participants.
Group 2 refers to male participants.

who are involved with students who are exceptional in some way. In order to determine the attitudes of regular classroom teachers concerning the need for, and availability of, special materials to be used with mainstreamed visually impaired students, three items addressing these issues were built into the Teacher Attitude Inventory. Attitudes expressed in reaction to the items are presented in this section.

The assertion that regular classroom materials are adequate for teaching visually impaired students met with almost unanimous disagreement by regular classroom teachers. Ninety-four percent of the subjects disagreed with this statement, while only one percent agreed. To the statement that specialized materials for use with visually impaired students are readily available to the regular class teacher, approximately two out of three (65 percent) disagreed. A full one-quarter (26 percent) of the educators indicated uncertainty, and nine percent felt there was ready access to materials. The claim proposing that special materials are required to teach visually impaired students was agreed to by 85 percent of the teachers, disagreed to by four percent, and 12 percent were unsure (see Table 22).

Teachers who had previously worked with visually impaired students, and those who had not worked with them, basically concurred in their attitudes toward material availability and necessity. Ninety-two percent of those who had previously taught such students, and all of the teachers who were teaching them for the first time believed regular classroom materials were inadequate to use with visually impaired students. Less concordance was found concerning

Table 22

Means, Standard Deviations, and Response Category

Percentages Toward Special Materials

Items	$\bar{X}$	SD	Response Category Percentages				
			SD	D	U	A	SA
6. Regular classroom materials are adequate for teaching visually impaired students.	1.6	0.64	44.9	48.7	5.1	1.3	0.0
15. Specialized materials for use with visually impaired students are readily available to the regular class teacher.	2.1	0.94	28.2	37.2	25.6	9.0	0.0
17. Special materials are required to teach visually impaired student.	1.9*	0.75	0.0	3.9	11.5	55.1	29.5

*Item reverse scored.

the availability of specialized materials. Seventy percent of the teachers who had previously taught visually impaired students indicated materials were not available, and 20 percent were uncertain. Of the teachers who had not previously taught visually impaired students, 42 percent disagreed, and 58 percent were uncertain concerning availability of specialized materials. Both groups agreed special materials are needed to teach visually impaired students. Rates of agreement were 82 percent of those with prior experience, and 100 percent of those without experience (see Table 23).

Educators at all three levels of schools disagreed with the statement that materials found in the regular classroom are adequate for teaching visually impaired students. One hundred percent of the elementary teachers, 94 percent of the junior high teachers, and 91 percent of the senior high teachers disagreed with the assertion. Frequencies of responses were noticeably different between groups when subjects reacted to the assertion that specialized materials for use with visually impaired students were readily available. Fifty percent of the elementary teachers disagreed with this; however, 25 percent did agree materials were accessible. In contrast, 74 percent of the junior high teachers disagreed, and three percent agreed. Senior high teachers fell between the two groups with 62 percent disagreeing, and nine percent agreeing. Approximately one-fourth of each group indicated they were uncertain with regard to availability of materials (25 percent, 24 percent, and 28 percent, respectively). Table 24 presents further description of these points.

Table 23

Means, Standard Deviations, and Response Category Percentages Toward Special Materials By Previous Teaching

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
6. Regular classroom materials are adequate for teaching visually impaired students.	1	1.7	0.67	43.9	48.5	6.1	1.5	0.0
	2	1.5	0.52	50.0	50.0	0.0	0.0	0.0
15. Specialized materials for use with visually impaired students are readily available to the regular class teachers.	1	2.1	0.95	28.8	40.9	19.7	0.0	10.6
	2	2.3	0.89	25.0	16.7	58.3	0.0	0.0
17. Special materials are required to teach visually impaired students.	1	2.0*	0.77	0.0	4.6	13.6	54.5	27.3
	2	1.6	0.51	0.0	0.0	0.0	58.3	41.7

*Item reverse scored.

[+]Group 1 refers to participants who had previously taught visually impaired students.
Group 2 refers to participants who had not previously taught visually impaired students.

Table 24

Means, Standard Deviations, and Response Category Percentages Toward Special Materials By Grade Level Teaching

Items	Group+	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
6. Regular classroom materials are adequate for teaching visually impaired students.	1	1.6	0.51	41.7	58.3	0.0	0.0	0.0
	2	1.4	0.61	61.8	32.4	5.8	0.0	0.0
	3	1.8	0.68	28.1	62.5	6.3	3.1	0.0
15. Specialized materials for use with visually impaired students are readily available to the regular class teachers.	1	2.6	1.08	16.7	33.3	25.0	25.0	0.0
	2	1.9	0.86	38.3	35.3	23.5	2.9	0.0
	3	2.3	0.91	21.9	40.6	28.1	9.4	0.0
17. Special materials are required to teach visually impaired students.	1	1.8*	0.39	0.0	0.0	0.0	83.3	16.7
	2	1.7	0.83	0.0	5.9	5.9	44.1	44.1
	3	2.0	0.73	0.0	3.1	21.9	56.3	18.7

*Item reverse scored.

+Group 1 refers to Elementary School teachers.
Group 2 refers to Junior High School teachers.
Group 3 refers to Senior High School teacher.

The three groups of teachers agreed special materials are required to teach visually impaired students, with the frequency of agreement decreasing from elementary to senior high school. While all the elementary teachers believed special materials are needed, 88 percent of the junior high and 75 percent of the senior high school teachers expressed this opinion. The greatest frequency of uncertainty occurred at the senior high school level where 22 percent of the teachers indicated this position (see Table 24).

When responses were reviewed in light of whether or not subjects had taken course work in the field of special education, great similarity in responses was noted. Nearly an equal percentage of both groups of teachers expressed the attitude that regular classroom materials are inadequate for teaching visually impaired students. Ninety-three percent of those with special education course work and 94 percent of those without designated this response. High similarity was again found regarding the ready availability of specialized materials to regular classroom teachers. Sixty-four percent of the teachers who had taken special education course work, and 66 percent of those who had not, felt such materials are not easily accessible. Somewhat less concurrence was demonstrated in reaction to the proposal that special materials are needed to teach visually impaired students. Ninety-three percent of the subjects who had course work in special education agreed, and seven percent disagreed with this. Of the participants without this type of course work, 83 percent agreed, and three percent disagreed. Uncertainty was shown by 14 percent of the latter subjects (see Table 25).

Table 25

Means, Standard Deviations, and Response Category Percentages Toward Special Materials By Course Work

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
6. Regular classroom materials are adequate for teaching visually impaired students.	1	1.4	0.85	71.4	21.4	0.0	7.2	0.0
	2	1.7	0.59	39.0	54.7	6.3	0.0	0.0
15. Specialized materials for use with visually impaired students are readily available to the regular class teachers.	1	2.2	1.05	28.6	35.7	21.4	14.3	0.0
	2	2.1	0.92	28.1	37.5	26.6	7.8	0.0
17. Special materials are required to teach visually impaired students.	1	1.7*	0.83	0.0	7.1	0.0	50.0	42.9
	2	1.9	0.73	0.0	3.1	14.1	56.3	26.5

*Item reverse scored.

[+]Group 1 refers to participants who had taken course work in special education.
Group 2 refers to participants who had not taken course work in special education.

Greater uncertainty to all three items was denoted by male teachers who took part in the study. As indicative of this, it was noted that in reaction to the claim materials in the regular classroom are adequate for teaching visually impaired students, 99 percent of the female teachers disagreed, and one percent agreed. On the other hand, 69 percent of the male teachers disagreed, and 31 percent were uncertain. The item maintaining that specialized materials are readily available resulted in 65 percent of the female teachers in disagreement, and 69 percent of the male teachers in disagreement. Males again were more frequently uncertain, 31 percent of the males in comparison to 25 percent of the females. To the statement that special materials are required to teach visually impaired students, 86 percent of the female subjects exhibited agreement, and nine percent were uncertain. Seventy-seven percent of the males agreed, but nearly one-quarter (23 percent) were uncertain on this point (see Table 26).

Teachers' Attitudes Toward Support Services

The majority of visually impaired students are enrolled in regular classes, and the responsibility for their education rests with regular classroom teachers. An essential part of the educational practice of integrating exceptional students into the mainstream of education is the policy of employing support personnel to serve as resources for regular class teachers and students. Resources or itinerant teachers are specially trained to work with

Table 26

Means, Standard Deviations, and Response Category

Percentages Toward Special Materials by Sex

Items	Group+	$\bar{X}$	SD	Response Category Percentages				
				SD	D	U	A	SA
6. Regular classroom materials are adequate for teaching visually impaired students.	1	1.6	0.59	47.7	50.8	0.0	1.5	0.0
	2	2.0	0.82	30.8	38.4	30.8	0.0	0.0
15. Specialized materials for use with visually impaired students are readily available to the regular class teacher.	1	2.2	0.98	29.2	35.4	24.6	10.8	0.0
	2	2.1	0.76	23.0	46.2	30.8	0.0	0.0
17. Special materials are required to teach visually impaired students.	1	1.9*	0.75	0.0	4.6	9.2	56.9	29.3
	2	1.9	0.76	0.0	0.0	23.0	46.2	30.8

*Item reverse scored.

+Group 1 refers to female participants.
Group 2 refers to male participants.

exceptional students and professionals who are involved in meeting the needs of such students. They have received academic preparation which has familiarized them with characteristics of exceptional populations, techniques which can enhance the likelihood of successfully communicating information to students, and materials to use with individuals who have various handicapping conditions. As a result of their expertise in these areas, resource teachers can be of tremendous assistance to regular class teachers who have not been formally trained to teach exceptional students, yet have such students enrolled in their classes.

In the present investigation, regular classroom teachers were asked to respond to statements pertaining to the availability, value, and interactions of the support personnel with whom they worked. It was believed elucidation of these attitudes would provide data which could contribute to efforts to facilitate the education of mainstreamed visually impaired students.

In response to the assertion that the itinerant/resource teacher is highly supportive of the regular class teacher, over two-thirds of the teachers (69 percent) agreed with this conjecture. Twenty-one percent of the subjects were uncertain on this issue, and 10 percent were in disagreement. Approximately equal percentages of the subjects expressed opposite views concerning whether the itinerant/resource teacher is readily accessible. Forty-four percent of the teachers felt the itinerant/resource teacher was not easily accessible, but 47 percent felt this professional was. Nearly all teachers

(99 percent) demonstrated they valued specialized supportive services. The communication between the regular class teacher and support personnel, a very important element in the mainstreaming of visually impaired students, was viewed as being constructive and helpful by 80 percent of the teachers. Thirteen percent were uncertain with regard to this item, and seven percent believed the communication was not productive (see Table 27).

A review of the items after dividing teachers into groups on the basis of whether or not they had previously taught visually impaired students brought slight differences to light. Both groups agreed the itinerant/resource teacher was supportive, with the teachers who had not previously taught visually impaired students indicating this attitude at a higher rate (83 percent to 68 percent). A substantial difference in attitudes occurred with regard to the comment that the itinerant/resource teacher was readily accessible. Forty-six percent of the educators with prior experience agreed with this, yet an even larger percentage of those who were teaching visually impaired students for the first time (58 percent) also believed the support personnel is highly accessible. Regarding the communication between the regular class teacher and support personnel, a larger percentage of the teachers without prior experience with visually impaired students agreed their interactions were constructive. Ninety-two percent of this group expressed this attitude as did 77 percent of those teachers who had previously taught visually impaired students (see Table 28).

Table 27

Means, Standard Deviations, and Response Category

Percentages Toward Support Services

Items	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
5. The itinerant/resource teacher is highly supportive of the regular classroom teacher.	3.7	0.96	3.8	6.4	20.5	51.3	18.0
7. The itinerant/resource teacher is readily accessible to the regular classroom teacher.	3.0	1.21	10.3	33.3	9.0	39.7	7.7
14. Teachers serving visually impaired students in regular classrooms value specialized supportive services	4.3	0.49	0.0	0.0	1.3	66.7	32.0
16. The communication between the regular class teacher and support personnel is usually constructive and helpful.	3.8	0.71	0.0	7.7	12.8	69.2	10.3

Table 28

Means, Standard Deviations, and Response Category Percentages Toward Support Services By Previous Teaching

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
5. The itinerant/resource teacher is highly supportive of the regular classroom teacher.	1	3.7	0.99	4.5	7.6	21.2	50.0	16.7
	2	4.1	0.67	0.0	0.0	16.7	58.3	25.0
7. The itinerant/resource teacher is readily accessible to the regular classroom teacher.	1	3.0	1.23	12.1	31.8	10.6	37.9	7.6
	2	3.3	1.13	0.0	41.7	0.0	50.0	8.3
14. Teachers serving visually impaired students in regular classrooms value specialized supportive services.	1	4.3	0.49	0.0	0.0	1.5	66.7	31.8
	2	4.3	0.49	0.0	0.0	0.0	66.7	33.3
16. The communication between the regular class teacher and support personnel is usually constructive and helpful.	1	3.8	0.75	0.0	9.1	13.6	66.7	10.6
	2	4.0	0.43	0.0	0.0	8.3	83.3	8.3

[+]Group 1 refers to participants who had previously taught visually impaired students. Group 2 refers to participants who had not previously taught visually impaired students.

Analysis of responses by grade level at which teachers were employed yielded data of slight interest other than that junior high school teachers were somewhat at odds with the other educators in expressed attitudes toward support services. Though all three groups demonstrated the same pattern of responses, junior high school teachers had the most noticeable differences in rates of responses on two of the four items under consideration in this section. The statements on which there was greatest concordance were those dealing with attitudes toward supportiveness of the itinerant/resource teacher and valuing support services. Rates of agreement with the first statement were 67 percent, 68 percent, and 72 percent for elementary, junior high, and senior high school teachers, respectively. Rates of agreement for the position that specialized support services are valued were 100 percent, 97 percent, and 100 percent for the preceding groups (see Table 29).

Elementary and senior high school teachers professed nearly equal agreement with the claim that the itinerant/resource teacher is readily accessible to the regular classroom teacher. Fifty-eight percent of the elementary teachers, and 56 percent of the senior high teachers expressed this view. In contrast, the plurality of junior high teachers (47 percent) indicated the support personnel are not highly available. In a similar vein, 12 percent of the junior high teachers disagreed with the statement that communication between the regular class teacher and the support personnel is usually constructive and helpful. None of the elementary teachers expressed disagreement with this item, though six percent of the

Table 29

Means, Standard Deviations, and Response Category

Percentages Toward Support Services By

Grade Level Teaching

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
5. The itinerant/resource teacher is highly supportive of the regular classroom teacher.	1	3.8	0.72	0.0	0.0	33.3	50.0	16.7
	2	3.7	0.97	3.0	8.8	20.6	50.0	17.6
	3	3.7	1.05	6.3	6.3	15.6	53.1	18.7
7. The itinerant/resource teacher is readily accessible to the regular classroom teacher.	1	3.3	1.14	0.0	41.7	0.0	50.0	8.3
	2	2.8	1.16	14.7	32.3	17.6	32.4	3.0
	3	3.1	1.28	9.4	31.3	3.1	43.7	12.5
14. Teachers serving visually impaired students in regular classrooms value specialized supportive services.	1	4.3	0.50	0.0	0.0	0.0	66.7	33.3
	2	4.2	0.50	0.0	0.0	2.9	70.6	26.5
	3	4.4	0.50	0.0	0.0	0.0	62.5	37.5
16. The communication between the regular class teacher and support personnel is usually constructive and helpful.	1	4.0	0.60	0.0	0.0	16.7	66.7	16.7
	2	3.6	0.73	0.0	11.8	14.7	70.6	2.9
	3	3.9	0.72	0.0	6.3	9.4	68.7	15.6

[+]Group 1 refers to Elementary School teachers.
Group 2 refers to Junior High School teachers.
Group 3 refers to Senior High School teachers.

senior high teachers did. It should be realized, however, that the vast majority of each group noted agreement with the statement. In Table 29 these distributions can be more readily identified.

An examination of responses offered by teachers who had taken course work in special education or who had not taken such courses showed the two groups produced essentially the same pattern of response frequencies. The most consistent discrepancy in reactions to the statements was the greater rate at which uncertainty responses were noted by teachers who had not taken special education course work. Data resulting from both groups attested to their overall agreement that the itinerant/resource teacher is highly supportive of the regular classroom teacher. Seventy-nine percent of those who had taken special education courses, and 67 percent of those who had not done so, indicated this was their belief. Of note is the fact that 22 percent of the latter group were uncertain in comparison to 14 percent of the former group (see Table 30).

Differences were observed in rates of agreement between groups in response to whether the itinerant/resource teacher is readily available. Fifty-seven percent of the subjects who had taken courses in special education believed the support teacher is available, but only 44 percent of the other teachers shared their view. Approximately 11 percent of the teachers without special education course work were uncertain on the item. None of the teachers who had taken this course work indicated they were uncertain (see Table 30).

An additional discrepancy in response rates occurred with regard to the constructiveness and helpfulness of communications between the

Table 30

Means, Standard Deviations, and Response Category Percentages Toward Support Services By Course Work

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
5. The itinerant/resource teacher is highly supportive of the regular classroom teacher.	1	3.8	0.97	7.1	0.0	14.3	64.3	14.3
	2	3.7	0.96	3.1	7.8	21.9	48.4	18.8
7. The itinerant/resource teacher is readily accessible to the regular classroom teacher.	1	3.1	1.23	7.1	35.8	0.0	50.0	7.1
	2	2.9	1.21	10.9	32.9	10.9	37.5	7.8
14. Teachers serving visually impaired students in regular classrooms value specialized supportive services.	1	4.4	0.50	0.0	0.0	0.0	64.3	35.7
	2	4.3	0.49	0.0	0.0	1.6	67.2	31.2
16. The communication between the regular class teacher and support personnel is usually constructive and helpful.	1	4.0	0.68	0.0	7.1	0.0	78.6	14.3
	2	3.8	0.72	0.0	7.8	15.6	67.2	9.4

[+]Group 1 refers to participants who had taken course work in special education.
Group 2 refers to participants who had not taken course work in special education.

regular class teacher and support personnel. Ninety-three percent of the subjects who had taken course work in special education, and 77 percent of those who had not taken such courses, agreed the interaction between these professionals was productive. Further examination of expressed attitudes showed that while none of the teachers who had taken special education course work were uncertain on this issue, 16 percent of the other teachers were undecided (see Table 30).

A last analysis to which responses to the four items concerning attitudes toward support services were subjected focused on the beliefs expressed by members of both sexes. Review of the reactions to the claim the itinerant/resource teacher is highly supportive produced differences in response rates by females and males. Nearly three out of four female teachers (72 percent) agreed the resource personnel is very supportive. In contrast, only about one out of two male teachers (54 percent) believed the itinerant/resource teacher is highly supportive (see Table 31).

A second variation in expressed attitudes occurred in association with the item maintaining that the itinerant/resource teacher is highly available. Female educators were equally divided on this point with 45 percent of them disagreeing with the contention, and 45 percent agreeing. The majority of the male educators (61 percent) agreed the supportive personnel are readily accessible. A final noticeable difference in expressed attitudes took place regarding the constructiveness of communications between the regular class teacher and support personnel. All the male teachers agreed this is

Table 31

Means, Standard Deviations, and Response Category

Percentages Toward Support Service by Sex

Items	Group[+]	$\bar{X}$	SD	Response Category Percentages SD	D	U	A	SA
5. The itinerant/resource teacher is highly supportive of the regular classroom teacher.	1	3.8	0.99	4.6	6.2	16.9	53.8	18.5
	2	3.6	0.87	0.0	7.7	38.5	38.5	15.3
7. The itinerant/resource teacher is readily accessible to the regular classroom teacher.	1	2.9	1.17	10.8	33.8	10.8	40.0	4.6
	2	3.4	1.39	7.7	30.8	0.0	38.5	23.0
14. Teachers serving visually impaired students in regular classrooms value specialized supportive services	1	4.3	0.49	0.0	0.0	1.5	67.7	30.8
	2	4.3	0.50	0.0	0.0	0.0	61.5	38.5
16. The communication between the regular class teacher and supportive personnel is usually constructive and helpful	1	3.8	0.75	0.0	9.2	15.4	66.2	9.2
	2	4.2	0.38	0.0	0.0	0.0	84.7	15.3

[+]Group 1 refers to female participants.
Group 2 refers to male participants.

true, yet an agreement rate of only 75 percent was noted by the female teachers. Nine percent of the female educators believed the interaction between these educators is not usually productive, and 15 percent were uncertain (see Table 31).

Open-Ended Responses

In the final section of the Teacher Attitude Investory, the respondent was asked:

> What specific or broad suggestions or recommendations do you have to (a) improve the quality of education of visually impaired students, and (b) to make mainstreaming these students an easier experience for regular classroom teachers?

Responses were obtained from 45 percent of the participants, and resulted in considerable diversity; however, 11 types of responses were determined in order to summarize the results. The following are the subjects' shortened and paraphrased suggestions or recommendations presented in order of the frequency in which they occurred:

1. Greater availability of special materials to meet the needs of visually impaired students (e.g., large-print typewriters, large-print books, viewers, audio equipment, etc.).
2. Inservice workshops to be offered to inform teachers of equipment and teaching strategies which can be utilized with visually impaired students.
3. Inservice programs to educate teachers as to the characteristics and abilities of visually impaired students.
4. As a part of one's undergraduate program, prospective teachers be required to take courses pertaining to the characteristics and teaching of exceptional students.

5. Regular classroom teachers be fully briefed as to the capabilities and needs of incoming visually impaired students.
6. Provisions be made for greater communication and cooperation with the itinerant personnel.
7. Increase in the number of itinerant teachers to assist regular classroom teachers in preparation of lessons and materials for visually impaired students.
8. Lower maximum class size when a visually impaired student is mainstreamed (e.g., implement a weighted class-size chart such as one visually impaired student weighs as three "regular" students).
9. Textbooks and books of high interest to visually impaired students be more readily available in large print.
10. School counselors be trained to work with visually impaired students concerning acceptance of their condition, educational opportunities after high school, and career development.
11. Teacher-Aids be available to assist regular classroom teachers in working with visually impaired students.

As is evident, the open-ended responses to the questionnaire employed in the study yielded considerably rich data. These comments will be further discussed in the following chapter.

CHAPTER V

DISCUSSION OF THE RESULTS

The present study was designed to assess the attitudes of regular classroom teachers who were teaching mainstreamed visually impaired students with respect to: mainstreaming visually impaired students; visually impaired students in general; responsibility for teaching visually impaired students; need for knowledge about visual impairments; materials employed with visually impaired students; support services; and recommendations and suggestions for further assisting professionals involved in educating visually impaired students.

The nature of the study was descriptive, and focused on an area not previously empirically examined. The exploratory character of the data obtained necessitated a detailed discussion of each item using frequency distributions. Hence, the predominant emphasis of this discussion is centered on further interpretation of the item responses. For consistency in the discussion of results, the same topical order of presentation as the preceding chapter's was followed.

Attitudes Toward Mainstreaming Visually Impaired Students

Recognizing that the success of educational programs for exceptional students appears to be largely dependent upon the attitudes of classroom teachers toward integrating exceptional students (Conine,

1969; Lowenfeld, 1973), it is important to note that a plurality of the teachers who participated in this study expressed attitudes favoring the integration of visually impaired students into regular classrooms. One out of two respondents expressed the opinion that visually impaired students should be mainstreamed, while one out of four teachers was uncertain. Further evidence of teachers' positive attitude toward mainstreaming visually impaired students was that two out of three teachers believed: mainstreaming these students did not have a negative effect on the total class program; visually impaired students should not be mainstreamed only into non-academic activities; and visually impaired students should not be placed in a segregated wing of a school building in which students who are not exceptional are taught.

This positive view of mainstreaming is at odds with the findings of numerous professionals who have investigated the attitudes of teachers concerning the enrollment into regular classes of students with other types of exceptionalities. Agard (1975), Barngrover (1971), Gickling and Theobond (1975), and Shotel et al. (1972) examined the attitudes teachers maintained regarding integrating students whose impairments were other than visual. In each of their studies the overwhelming majority of teachers unfavorably viewed mainstreaming exceptional students. It was interesting to note, therefore, that teachers appeared to be more receptive to the inclusion of visually impaired students into regular classes than to the inclusion of students with other handicapping conditions.

The high agreement toward enrolling visually impaired students in regular classes found in the present study could be attributed to a number of possible factors. Perhaps the most likely candidate for influencing teachers' attitudes was the fact that mainstreaming visually impaired students has been an educational policy for the past 30 years (Jones & Collins, 1966). As a consequence of a policy being implemented for many years, and teachers being a product of the policy, professionals are prone to be in agreement with the specific educational practice.

A second factor which may have influenced a positive view toward mainstreaming is that the subjects of the present study were involved in educating visually impaired students of normal or educable mentally handicapped status. Studies which discovered negative attitudes toward mainstreaming often focused strictly on teachers' attitudes associated with integrating mentally handicapped or emotionally disturbed students. There may be characteristics inherent to these groups which preclude teachers reacting favorably toward their inclusion in the regular classroom.

Analysis of the rates at which different groups agreed with mainstreaming visually impaired students indicated slight variations in their attitudes. Teachers who were employed at the junior high school level were least favorable toward mainstreaming visually impaired students. Male teachers indicated at a higher response rate than female teachers they agreed with mainstreaming these students. It is believed the attitudes of these groups can best be understood in terms of expressed attitudes toward support services indicated by

the respective groups. For this reason, analysis of the frequency of the responses concerning mainstreaming noted for these groups is deferred to the appropriate section of the chapter.

Teachers who had taken special education course work or had previously taught visually impaired students more frequently expressed a positive view toward mainstreaming. Educators who were teaching visually impaired students for the first time were less favorable toward mainstreaming. These results were consistent with studies which have found knowledge concerning exceptional conditions in students and prior contact with exceptional populations positively affect attitudes (DeLeo, 1976; Fine, 1967; Kuhn, 1971; Moore & Fine, 1978; Proctor, 1976).

The finding that regular class teachers who report having had previous teaching experience with visually impaired students had more positive attitudes toward mainstreaming them did not allow one to infer causality. Perhaps those who held positive attitudes initially sought out teaching experience with visually impaired students. If the reverse is true, however, that experience with visually impaired students leads to the formation of positive attitudes, this result suggested an obvious strategy for increasing the probability that mainstreaming visually impaired students will be successful. Regular class teachers should have as many contacts as possible in school and other settings with visually impaired students. The same reasoning can be used to argue in favor of regular classroom teachers taking course work in special education when preparing for careers in teaching or as inservice preparation courses.

Attitudes Toward Visually Impaired Students

The importance of teachers' attitudes toward exceptional students has been repeatedly emphasized as a critical factor to enriching students' school programs and total growth (Haring et al., 1958; Jones, Lavine, & Shell, 1972; Pelone, 1957). If teachers maintain positive attitudes toward exceptional students and believe such students are capable of performing adequately in regular classrooms, this may be communicated to students and favorably affect their academic work (Dennison, 1952).

Despite the fact teachers' attitudes toward exceptional students are recognized as important factors in students' education, studies have not focused on teachers' attitudes toward visually impaired students *per se*. Rather, investigations have measured attitudes toward mainstreaming and based on these assessments, have made inferential statements about teachers' attitudes toward exceptional students. Three items on the Teacher Attitude Inventory were designed to gather data on such attitudes since no other study had been undertaken in this area.

The statements pertaining to teachers' attitudes toward visually impaired students elicited some valuable findings. The majority of the regular classroom teachers queried disagreed with the conjecture that students who possess normal visual capabilities are more intelligent than visually impaired students. Two out of three respondents maintained this position, while three out of ten were uncertain. Furthermore, three out of four teachers stated age appropriate behavior should be expected of visually impaired students,

notwithstanding their handicapping conditions. Though the majority of subjects stated that visually impaired students were not less intelligent, and believed age appropriate behavior was to be expected of them, one out of every two teachers believed that because of their specialized problems, visually impaired students should meet different academic standards in the regular classroom. Such an inconsistency in expressed attitudes warrants consideration.

Based on the responses which occurred to the above items, it appeared teachers recognized visually impaired students as being cognitively and behaviorally capable of age appropriate behavior, yet did not expect this type of behavior of them. It is unlikely teachers are unaware of the contradiction which exists in their responses. A probable explanation for their apparent inconsistency is that conditions external to the individual, i.e., environmental, play a role in the teachers' expectations.

Teachers and students, for whatever reasons, may not be using learning aids which enable visually impaired students to meet the same academic standards as their sighted peers. The lack of use of educational materials and the limitations this places on visually impaired students may be one factor to account for teachers establishing different standards for visually impaired students. The likelihood of this explanation gains credence if one recalls the suggestion or recommendation made most often by the participants of the study which was that there be greater availability of special materials to meet the needs of visually impaired students. It is possible that if appropriate materials for use with visually

impaired students were more available, a majority of the teachers would have stated visually impaired students should meet the same standards as other students.

Participants who had not previously taught visually impaired students most frequently expressed the opinion that such students should meet different academic standards. One may again consider unavailability of resources as a possible explanation for this variation between groups' responses. It is plausible that teachers who have previously worked with visually impaired students have learned how to more efficiently use regular classroom materials to meet the needs of exceptional students. As a result of their experiences, they may be able to structure learning situations so visually impaired students have more opportunities to participate in class activities, and thus, meet the same standards as are set for students with normal vision.

On this same item, whether visually impaired students should meet different academic standards, the only other variation in expressed attitudes between groups which merits discussion was noted between elementary school teachers, and junior and senior high school teachers. One out of three elementary teachers thought visually impaired students should meet different standards; in comparison, one out of two junior and senior high school teachers thought this way. A factor which may be important in attempting to interpret these response rate differences is the levels of cognition which the various grade level students possess. Students at the elementary level are either at the preoperational or concrete operational levels of

thought, while those at the junior or senior high school levels are either in the process of attaining, or have already attained, formal operational thought (Ginsburg & Opper, 1969).

Students at preoperational or concrete operational levels of thought are closely tied to real world experiences when acquiring and acting upon new information. Students at the formal operational level of cognition are by definition capable of dealing with abstract, hypothetical information. Because of the greater complexity of information which is involved at this level, there is also greater complexity involved in demonstrating acquisition of this information.

To use a mathematical situation to illustrate this point, consider an elementary school student learning addition, and a senior high school student learning algebra. Whereas a student learning addition can directly demonstrate information acquisition by means of an abacus, it is much more difficult for a student learning algebra to demonstrate what has been learned. Thus, because of the abstractness of subject matter and the complex behaviors which are required to demonstrate mastery of academic materials, high school level teachers may believe that visually impaired students should meet different academic standards.

Attitudes Toward Responsibility for Visually Impaired Students

Research investigating teachers' willingness to participate in mainstreaming exceptional students into regular classrooms have had serendipitous results concerning teachers' views toward who should

be responsible for educating these students. Similar to findings which indicated regular classroom teachers felt negatively about mainstreaming (Agard, 1975; Gickling & Theobold, 1975), studies showed regular classroom teachers believed professionals who were trained in special education should be responsible for meeting the academic needs of exceptional students (Barngrover, 1970; Blazovic, 1972; Moore & Fine, 1978). In order to better understand who regular classroom teachers believed should be responsible for serving visually impaired students, items pertaining to this point were included in the Teacher Attitude Inventory.

Data from the present study do not support the findings of other investigators with respect to attitudes toward the responsibility of educating visually impaired students. A majority of the participants responded to items concerning teacher responsibility in such ways as to indicate they believed regular classroom teachers share, and should share, the responsibility of educating mainstreamed visually impaired students. In contrast to educators polled in studies which concerned attitudes toward students with other types of handicapping conditions, it appeared teachers more favorably viewed accepting responsibility when working with visually impaired students.

As with other portions of the data, some differences were noted in response rate frequencies demonstrated by subjects when analyzed in terms of distinct blocking variables. Discrepancies in response rates which seem to be substantial and may have implications for suggestions/recommendations to facilitate educating visually impaired students are discussed in this section.

The most noticeable differences in response rates were observed when teachers' reactions were examined on the basis of whether or not they had previously taught visually impaired students. Specifically, it was learned that though the majority of both groups of teachers agreed itinerant/resource personnel should not have primary responsibility for the education of mainstreamed visually impaired students, only about one out of two educators who had not previously worked with visually impaired students believed the regular classroom teacher actually is as responsible as the resource teacher for these students' education. In contrast, three out of four teachers with prior work experience with visually impaired students felt the regular classroom teacher is as responsible. Differences in response rates were also found with regard to whom teachers felt visually impaired students should first turn to for academic assistance. Six out of ten teachers who had previously taught visually impaired students believed the first turned to should be the classroom teacher. An equal proportion of teachers who had not previously taught visually impaired students disagreed with this view.

Such response discrepancies can perhaps be readily explained in terms of previous teaching experiences. Educators who had previously been involved with mainstreamed visually impaired students had been, simply as a natural consequence of being associated with these students, consulted for academic assistance on numerous occasions. As a result of their interactions with visually impaired students, the teachers learned they could indeed be of assistance to these students, and there was not the need for response personnel to be involved in

all problems which arose. Teachers who had not previously taught visually impaired students did not have this backlog of successful experiences and, therefore, may have been more likely to question the adequacy with which they could meet students' needs. A similar lack of experience, and confidence, may have led to this latter group of teachers not recognizing the value of the role they played in the education of visually impaired students and their responsibility for these students' education.

When data were analyzed with regard to whether or not one had taken course work in the area of special education, a difference was found in response rate frequencies. Of the teachers who had taken course work in special education, four out of ten believed visually impaired students should first consult regular classroom teachers for academic assistance. The rate of agreement with this statement was higher among teachers who had not taken course work, as six out of ten maintained this view.

A possible explanation for this finding, and one which is in keeping with the view expressed by Hirshoren and Burton (1979), is that teachers who have not taken course work in special education may be unaware of what is needed by visually impaired students. There may be a naiveté of the teachers regarding special educational needs and teacher skills required to be of help to visually impaired students when turned to for assistance. The naiveté which these teachers possess is not to be criticized. It may be that in some respects it is productive. A teacher may not be "informed enough" to have decided what one cannot do, and thus, one proceeds to do it. It

should perhaps be mentioned that naiveté is not to be viewed as the ideal position from which regular classroom teachers react to exceptional students' needs. The ideal, rather, would be to educate regular classroom teachers to the extent they are knowledgeable about handicapping conditions, aware of intervention and education strategies to be used, and confident of their abilities to be successful educators of students who are exceptional in some way.

Another demographic breakdown which yielded response rate differences was grade level at which educators were employed. Elementary teachers voiced the highest rate of positive attitudes toward regular classroom teachers accepting responsibility for teaching visually impaired students. Senior high school teachers, on the other hand, were least enthusiastic on this issue.

A conceivable explanation for this pattern of responses concerning attitudes toward the view that regular classroom teachers share, and should share, the responsibility of educating mainstreamed visually impaired students may be associated with the different standards which the majority of senior high school teachers think should be expected of visually impaired students. The issue of maintaining different standards for visually impaired students was discussed in the preceding section, and will not be elaborated on here. Suffice it to say that perhaps because of the abstractness of content matter and the environmental complexity involved in acquisition of it, senior high school teachers believed specially trained professionals should assume primary responsibility for the education of visually impaired students.

A final noteworthy difference was observed in male and female teachers' expressed attitudes toward whether resource personnel should be most responsible for the education of mainstreamed visually impaired students. Though about half of both male and female educators disagreed that the resource personnel should be most responsible, four out of ten female teachers believed this professional should be most responsible, while none of the male teachers did. This large incongruity in response rates needs to be understood as it represents considerable differences in group attitudes.

It is highly probable that the communication which transpires between regular classroom teachers and resource personnel is an important factor in teachers' attitudes toward responsibility. If there is constructive interaction between these professionals, it is likely that regular classroom teachers will express attitudes indicating they are as responsible as the resource personnel, and resource personnel should not maintain primary responsibility for educating mainstreamed visually impaired students. Support for this explanation is gathered from data which demonstrated that male subjects in the present study found resource personnel more accessible, and more frequently indicated interactions with such personnel were constructive and helpful. Further discussion of attitudes toward support services can be found in the appropriate section of this chapter.

Attitudes Toward the Need for Knowledge About Visual Impairments

It was anticipated that data gathered on the attitudes of regular classroom teachers toward the need for course work and inservice training about visual impairments would be among the most useful information acquired in this study. Other investigators who focused on teachers' attitudes toward exceptional students in the classroom, notably a study by Vacc and Kirst (1977), found regular classroom teachers believed there was a need for educators to have taken at least one course in special education. To further elaborate on this belief, items dealing specifically with attitudes related to special education course work and inservice programs to facilitate working with visually impaired students were included in the present study.

The overall result of this facet of the research was that the vast majority of subjects indicated course work in special education and inservice training opportunities would be highly useful to teachers of mainstreamed visually impaired students. Over three-fourths of the participants agreed with the statement that all teachers should be required to take at least one course in special education during their teacher preparation program, and almost two out of three respondents stated only one college level course in special education would not be adequate preparation of this type for teachers who have visually impaired students in their regular classes. Even more impressive than the above rates of agreement concerning the need for special education courses was the fact that over nine out of

ten teachers believed inservice training and workshop programs related to visual impairments should be offered to regular class teachers of visually impaired students.

When these data were examined after subjects had been grouped on demographic variables, there was still overwhelming agreement of respondents concerning this issue. This high rate of concordance precludes the necessity of discussing results in terms of various group responses. The findings of this section can be appropriately summarized by stating that a solid majority of all subjects, regardless of whether their responses were examined in terms of teaching experiences with visually impaired students, course work in special education, grade level at which one was employed or respondents' sex, expressed positive attitudes toward special education course work and inservice programs for teachers of mainstreamed visually impaired students.

The implications of these results are self-evident if professionals involved in curriculum development and those concerned with continuing career preparation of classroom educators accord any weight to the attitudes of regular classroom teachers. Based on the findings stated here, present and future regular classroom teachers would be well served by enrolling in at least one special education course which deals in part with visually impaired students. To ensure this is accomplished, undergraduate teacher education programs could require that students preparing to be regular classroom teachers take a number of special education courses which would prepare them to work with exceptional students.

Similarly, the initiation or expansion of inservice training opportunities for professionals who are already involved with mainstreamed visually impaired students would be advantageous. Investigations (Glickling & Theobold, 1975; Shotel et al., 1972) have demonstrated regular classroom teachers view themselves as unqualified and lacking the necessary skills to teach exceptional students. Inservice training programs can possible alleviate these feelings. If teachers can acquire knowledge concerning materials and strategies to employ with visually impaired students, there will be an increased likelihood that they will perceive themselves as being more competent when working with these students. The improved image of oneself as a competent educator would presumably exert a positive influence on the attitudes one possesses toward working with visually impaired students. It is probable, therefore, that required course work in special education and inservice training opportunities would be beneficial to teachers, and would increase and enhance the educational opportunities available to visually impaired students.

Attitudes Toward Materials Employed With Visually Impaired Students

The majority of regular classroom teachers who took part in the present study affirmed the results which other researchers had found concerning teachers' attitudes toward the need for and availability of materials to be used when teaching exceptional students. In accord with the results reported by Barngrover (1970) and Shotel et

al. (1972), results from the present study indicated teachers believed materials specially designed to facilitate participation of exceptional students in regular class programs were required if students were to be best served. Approximately nine out of ten subjects expressed the beliefs that special materials were required and regular classroom materials were inadequate for teaching mainstreamed visually impaired students. Two out of three teachers indicated that despite the need for specialized materials for use with visually impaired students, such materials were not readily available to the regular classroom teacher.

In light of previous research which focused on teachers' attitudes associated with the education of children who were exceptional in some way other than visual, the present findings are not surprising. They are important, however, for they once again emphasize the priority which must be given to making appropriate educational materials available to teachers of mainstreamed visually impaired students. If a serious commitment to the educational policy of mainstreaming exceptional students is being made by professionals and society, then it is obvious increased efforts are needed to provide regular classroom teachers with the materials required to better educate these students.

A breakdown of data by demographic characteristics of respondents provided little indication that such characteristics were associated with teachers' attitudes on the issue of need for and availability of resources. The only area in which somewhat substantial disagreement in response frequency rates occurred was whether

specialized materials were readily available. A larger percentage of teachers who had previously taught visually impaired students in their classes indicated special materials were not available.

The limitations of the present study prevent conclusions regarding why the noted differences in response rates occurred. There are, however, two possible explanations for this result. It may have been that as a result of prior experiences with visually impaired students, teachers were more aware of materials which existed and could be useful to them in their efforts to work with visually impaired students. A second possible explanation is that resources which were available may have been distributed to teachers who were having their first experiences with visually impaired students. Realizing teachers who are working with visually impaired students for the first time were likely to be less certain of their abilities to teach mainstreamed visually impaired students, it might have been an administrative policy to provide whatever resources were available to this group of teachers. Future research in this area is required before any causal relationships can be asserted.

Differences existed in response rate frequencies expressed by subjects working at various grade levels regarding the availability of specialized materials for use with visually impaired students. One out of two elementary school teachers stated such materials were not available, while three out of four junior and senior high school teachers stated the resources were not available. These variations may have been attributable to the fact that different kinds of learning aids were appropriate at different educational levels. Those

required at the elementary level, e.g., an abacus, were not prevalent and less expensive than those required at the high school level, e.g., a talking calculator.

Further findings associated with perceived attitudes toward need for and availability of resources were that senior high school teachers and male teachers indicated at higher frequency rates that they were uncertain on these items. It is probable that a higher rate of male teachers stating they were uncertain is a consequence of most of them being employed at the senior high school level rather than for some other reason. Unfortunately, data yielded by the present or other studies do not provide information on which an interpretation of this finding can be based.

The concordance among educators that special materials are needed, but not available for use with visually impaired students, implies efforts are needed to make resources more available to regular classroom teachers. If an aim of public education is to meet the academic needs of all students, then programs must be initiated or expanded to better provide teachers and students with equipment which will make achievement of this goal more possible.

Attitudes Toward Support Services

As numerous professionals have stated, the role of the itinerant/resource teacher is critical to mainstreaming exceptional students (Cruickshank & Johnson, 1967; Haring, 1978; Jones & Collins, 1966; Misbach & Sweeney, 1970). The support and knowledge which

trained professionals have to offer can be a most important factor in determining whether integration of exceptional students will be successful. Attitudes of regular classroom teachers concerning the availability, usefulness, and quality of support services to assist their teaching of mainstreamed visually impaired students were assessed in the present study.

A majority of the regular classroom teachers polled stated that itinerant/resource personnel with whom they interacted concerning the education of visually impaired students were highly supportive of them. Only one out of ten educators felt the support personnel were not highly supportive. Almost all participants agreed teachers serving visually impaired students in regular classrooms valued specialized supportive services, and eight out of ten teachers stated communication with support personnel was usually constructive and helpful. The most negative finding related to attitudes toward support services was that a considerable proportion of the subjects (four out of ten) believed resource personnel were not readily accessible to regular classroom teachers. An understanding of these findings can best be gathered by examining attitudes expressed by various subgroups of teachers.

To begin, regular classroom teachers who had not taken course work in special education, less frequently than their counterparts who had taken such course work, noted support personnel were readily available and communication with them was usually constructive. One possible reason for the response rate differences was that teachers who had not taken course work in special education may have maintained

inappropriate expectations of support personnel and what they could offer. It was likely that support personnel were equally available to teachers, regardless of whether or not teachers had taken special education course work, but that teachers who had not taken such course work were less familiar with the many duties of resource personnel, and hence, felt they should have been more easily accessible.

Similarly, a lack of knowledge on the regular classroom teachers' part may have led to inflated expectations of what information support personnel could share with them. This could explain why a larger rate of teachers who had not taken special education course work found communications with support personnel unsatisfying. Teachers may have anticipated itinerant/resource teachers would be able to solve problems which they could not. Because support personnel could not offer ready solutions to troublesome learning situations, regular classroom teachers may have believed communications were not helpful. Teachers who had taken course work in special education, on the other hand, may have had more realistic expectations of support personnel, and thus, found interacting with them profitable.

It may also be the case that teachers who had taken special education course work were better able to understand what information was being conveyed by support personnel, and could use it more easily. This could explain the more favorable opinions expressed by these teachers on the issue of helpfulness of communications with support personnel. All these points lend support to the argument in favor of regular classroom teachers taking special education courses at some time in their careers.

The analysis of responses in light of whether or not teachers had previously taught mainstreamed visually impaired students produced no substantial differences in response rates. The only pattern which did emerge was that teachers who were teaching mainstreamed visually impaired students for the first time expressed favorable attitudes toward support services at a slightly higher rate on all items. A clear explanation for this finding is that these teachers, who were perhaps somewhat unsure of themselves and of what could be expected in the way of support, were pleased and grateful for whatever assistance was rendered them by support personnel.

Of the teachers who participated in this research, those employed at the junior high school level expressed the most negative attitudes toward support services. This group had the highest response rates, indicating support personnel were not highly available, and communications with support personnel were not constructive and helpful. It is impossible to determine from the data collected in this study why this occurred. There was not a higher proportion of junior high school teachers who had not taken special education course work than was found at the elementary or senior high school levels; thus, this factor can be ruled out as a possible explanation. It is probable, therefore, that there is some variable not included in the present study which is associated with this finding. This needs to be examined in future research.

As will be recalled from the section focusing on regular classroom teachers' attitudes toward mainstreaming, teachers who were employed at the junior high school level were least favorable toward

mainstreaming visually impaired students. If it is true support services are critical to mainstreaming efforts, and if junior high school teachers view these services least favorably, then one can hypothesize there is a relationship between teachers' attitudes toward support services and attitudes toward mainstreaming visually impaired students. That this relationship is causal in nature cannot be concluded based on the present study. Additional evidence must be accumulated before a causal relationship is assumed.

The same reasoning can be applied in an effort to understand why male teachers indicated at a higher response rate than female teachers they agreed with the policy of mainstreaming visually impaired students. Male teachers expressed at a higher frequency response rate that they found support personnel readily accessible and communication with such personnel constructive. These more frequently stated favorable attitudes toward support services may partially explain why male teachers demonstrated positive attitudes toward mainstreaming at a higher response rate than female teachers did.

The findings that teachers' attitudes toward support services are associated with attitudes toward mainstreaming, and that teachers who have taken course work in special education respond favorably at a higher response rate concerning such services, suggest three implications for efforts to integrate visually impaired students into regular classrooms. One important action which the data suggest is that efforts be taken to educate regular classroom teachers through special education course work. A second, and equally productive

route, is to deepen teachers' appreciation of the support services offered. The third, and perhaps most important implication of this data, is that support personnel need to be more readily accessible to regular classroom teachers. The most realistic way to achieve this is by increasing the number of support personnel to work with regular classroom teachers. Direct suggestions made by participants of the study were that there be greater communication with support personnel and an increase in the number of support personnel to assist regular classroom teachers. These points are discussed in the following section.

Open-Ended Responses

The open-ended responses in the present study were obtained by asking regular classroom teachers what suggestions or recommendations they had for improving the quality of education available to visually impaired students, and making the integration of these students an easier experience for regular classroom teachers. Their written responses reinforced, expanded, and reiterated the attitudes which were indicated through the Likert-type items of the data collection instrument. The suggestions and recommendations fell essentially into four categories: materials, inservice training, course work, and support services.

The need for greater availability of special materials was the point most often stated by subjects. The participants asserted there was a severe shortage of specialized equipment which was necessary if visually impaired students were to be best served in regular

classrooms. Teachers maintained the lack of appropriate materials seriously hampered their educational efforts and precluded schooling being as successful as it could be for mainstreamed visually impaired students.

The second most frequently offered suggestion concerned the need for knowledge about visual impairments and characteristics of exceptional students. The regular classroom teachers strongly declared inservice training and workshop programs should be offered to teachers who have mainstreamed visually impaired students enrolled in their classes. The focus of these programs, they believed, should be the characteristics and capabilities of visually impaired students, and the types of modifications of equipment which could be used with them.

Related to the idea of inservice efforts to prepare teachers was the recommendation that undergraduate students enrolled in teacher education programs be required to take a few courses in the area of special education. Respondents did not indicate how many such courses should be required or on what they should specifically focus. Further examination of this point is needed before more specific recommendations can be offered to higher education curriculum developers.

Various types of suggestions were made regarding support services. Points most often made were that more frequent contact was needed with support personnel, and more support personnel whose primary function would be to assist in the education of mainstreamed visually impaired students needed to be employed by the public

schools. Additional recommendations were that there be more complete briefings of regular classroom teachers before visually impaired students are placed in their classes, more teacher-aides be available to assist in working with visually impaired students, and school counselors be better trained to work with students who have visual impairments.

Methodological Considerations

The descriptive self-report design appeared to be an appropriate research strategy to acquire the information sought in the present study. The nature of the research was exploratory, and the descriptive design facilitated the collection of data concerning regular classroom teachers' attitudes at the time of the study.

Concerning the subjects of the study, certain points need to be presented. It is important to note there was not an even distribution of subjects in terms of the specified demographic variables. There were many more female subjects, more subjects who had previously taught visually impaired students, more who had not taken course work in special education, and many fewer elementary school teachers than junior or senior high school teachers. The differences in group sizes eliminated any possibility of gaining useful information by means of a statistical comparison of respective group menas.

As to the sampling procedure, an 84 percent return rate was achieved. Though this response rate is highly acceptable, it was hoped that an 87 percent return rate would be met. Had this large a sample been available, it would have been possible to examine the

data by means of a factor analysis statistical technique, thereby acquiring additional information about respondents and the data collection instrument. Follow-up mailings had little impact on improving the rate of return. These additional endeavors appeared to initiate the return of only four questionnaires.

Several comments need to be made concerning the actual construction of the Teacher Attitude Inventory. First, the length of the instrument appeared satisfactory. Two pages of forced-choice items enticed and assisted the respondent by reducing the completion time. Placing the open-ended question on a page of its own led to a considerable proportion of the respondents filling an entire page with comments and recommendations. Second, it is believed the color of the paper (buff), and the lined margin around the context of the instrument assisted the response rate by making the instrument more visually attractive. Third, there are a few items in the questionnaire that need rewording or deleting. Respondents indicated a lack of clarity concerning what was meant by the term, support services, and stated the items pertaining to special education course work should have included an idea of what would be taught in such course work.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this research was two-fold: first, to assess teachers' attitudes concerning mainstreaming visually impaired students, support services, specialized materials needed to work with visually impaired students, responsibility for educating visually impaired students, need for knowledge about visual impairments, and general attitudes toward visually impaired students; and second, to provide an information base to assist professionals in the field of education in developing effective educational and administrative policies to facilitate mainstreaming visually impaired students.

Because of the exploratory nature of the research, a descriptive self-report study design employing questionnaires was used. A new instrument was constructed, entitled the Teacher Attitude Inventory. It was derived from a thorough review of the literature. Items were reviewed by eight judges. In its final form, the data collection instrument consisted of three pages and 25 items, most of which were Likert scaled.

The target population was all regular classroom teachers in the Greensboro Public Schools who, at the time of the study, were teaching mainstreamed visually impaired students. Ninety-three teachers met this criterion, and all were given questionnaires. An 84 percent return rate was achieved, for a total sample size of 78 educators.

The data obtained were analyzed with the assistance of the SAS computer program. Frequencies, means, standard deviations, and percentages of response categories were computed for each individual item. The data were examined for all teachers combined and by various groupings based on specific demographic variables.

Conclusions

The following conclusions were drawn from the analysis of the data:

1. A plurality of the participants expressed attitudes favoring the integration of visually impaired students into regular classrooms. Teachers who had taken course work in special education or had previously taught mainstreamed visually impaired students expressed a positive view of mainstreaming at higher frequency response rates than did their counterparts.
2. A majority of the regular classroom teachers polled believed visually impaired students were not less intelligent than their classmates who had normal vision, and age appropriate behavior should be expected of visually impaired students. Despite these views, approximately half the subjects thought visually impaired students, because of their specialized problems, should meet different academic standards when placed in regular classrooms. Participants who had not previously taught visually impaired students, and those employed at junior or senior high school levels, expressed the latter view at highest response rates.

3. Concerning teacher responsibility for the education of mainstreamed visually impaired students, a majority of teachers responded in such ways as to indicate they believed regular classroom teachers shared, and should share, this responsibility. Elementary school teachers were more willing to assume responsibility for the education of visually impaired students than were junior or senior high school level teachers.
4. An overwhelming majority of regular classroom teachers believed course work in special education and inservice training opportunities would be highly useful to teachers of mainstreamed visually impaired students. Teachers who had not previously taught visually impaired students, and those who had taken course work in special education, most strongly indicated these informational programs would be helpful.
5. With respect to specialized materials for use with visually impaired students, regular classroom teachers believed such materials were required, but not readily available. A strong majority of teachers thought regular classroom materials were inadequate to meet the needs of visually impaired students, and felt students would not be best served until specialized materials became easily accessible.
6. The vast majority of teachers stated specialized support services were highly valued, and resource personnel were very supportive of them. However, nearly half of the regular classroom teachers also stated support personnel were not readily available for consultation. Teachers who had not

taken course work in special education expressed negative attitudes associated with support services at the most frequent response rates.

Recommendations

On the basis of the findings and conclusions of this study, a number of recommendations for future action and research are suggested.

1. If the Teacher Attitude Inventory is to be used in future research, it should be subject to examination by factor analysis. There are items which need rewording or elaboration, and more open-ended questions should be included.
2. More research of this nature needs to be conducted and addressed to replication and further explorations using larger samples. This would enable greater comparison of group responses and examination of existing relationships between variables.
3. Programs need to be initiated or expanded to provide more teachers and students with specialized materials which will assist in meeting the academic needs of visually impaired students.
4. Policies and procedures should be established or altered to enable more frequent interactions between support personnel and regular classroom teachers.
5. More support personnel should be employed by the public schools to act as resources, specifically for teachers of mainstreamed visually impaired students.

6. School administrators need to have inservice training and workshop programs initiated or expanded to provide information concerning the characteristics and needs of visually impaired students, and to educate teachers about equipment which can be used to meet these students' academic needs.
7. Educators at the college or university level and curriculum developers should consider altering teacher education programs so undergraduate students are required to take various courses in special education to prepare them for working with exceptional students who may be mainstreamed into their classes.
8. Administrative efforts need to be made to increase the amount of formal and informal contact between visually impaired students and teachers who are not currently teaching such students. Of particular interest is that teachers acquire greater understanding of the capabilities and needs of visually impaired students.
9. The educational preparation of school counselors should better prepare professionals to assist visually impaired students in accepting their handicapping conditions and making educational and career decisions.

BIBLIOGRAPHY

Abeson, A., Bolick, N., & Hass, J. A primer on due process. Reston, VA: The Council for Exceptional Children, 1975.

Abeson, A., & Zettel, J. The end of the quiet revolution: The Education of All Handicapped Children Act of 1975. Exceptional Children, 1977, 44(2), 114-130.

Agard, J. A. The classroom ecological structure: An approach to the specification of the treatment problem. Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C., 1975.

Alonso, L. The child with impaired vision in the regular classroom. Seer, 1973, 74(3), 5-8.

American Foundation for the Blind. Facts about blindness. New York: American Foundation for the Blind, 1976.

Barngrover, E. A study of educators' preferences in special education programs. Exceptional Children, 1971, 37(10), 754-755.

Baraga, N. Visual handicaps and learning. Belmont, CA: Wadsworth, 1976.

Berry, K. Models for mainstreaming. San Rafael: Dimensions, 1972.

Blazovic, R. R. The attitudes of teachers, parents, and students toward integrated programs for borderline educable mentally retarded students. Dissertation Abstracts International, 1972, 32, 3431A-3432A. (University Microfilms No. 72-23, 487)

Bradfield, R. H., Brown, J., Kaplan, P., Rickert, B., & Stannard, R. The special child in the regular classroom. Exceptional Children, 1973, 39(5), 384-390.

Conine, T. A. Acceptance or rejection of disabled persons by teachers. The Journal of School Health, 1969, 39(4), 278-281.

Cowen, E., Underberg, R., & Verrillo, R. The development and testing of an attitude scale. Journal of Social Psychology, 1958, 48 (2), 297-304.

Cruickshank, W. M., & Johnson, G. O. (Eds.). Education of exceptional children and youth. Englewood Cliffs, NJ: Prentice-Hall, 1967.

Cutsforth, T. D. The blind in school and society (2nd ed.). New York: American Foundation for the Blind, 1951.

DeLeo, A. V. The attitudes of public school administrators and teachers toward the integration of children with special needs into regular education programs. Dissertation Abstracts International, 1976, 37, 915A-916A. (University Microfilms No. 76018, 930)

Dennison, A. L. Partially seeing children aren't so different. New York: National Society for the Prevention of Blindness, 1952.

Deno, E. N. Educational, instructional alternatives for exceptional children. Arlington, VA: Council for Exceptional Children, 1973.

Dunn, L. M. Exceptional children in the schools: Special education in transition (2nd ed.). New York: Holt, Rinehart, & Winston, 1973.

Farrell, G. Blindness in the United States. In P. A. Zohl (Ed.), Blindness. Princeton: Princeton University Press, 1950.

Farrell, G. The story of blindness. Cambridge: Harvard University Press, 1956.

Fine, M. J. Attitudes of regular and special class teachers toward the educable mentally retarded child. Exceptional Children, 1967, 33(6), 429-430.

Gay, L. R. Educational research: Competencies for analysis and application. Columbus, OH: Charles E. Merrill, 1976.

Gearheart, B. R., & Weishahn, M. W. The handicapped child in the regular classroom. St. Louis: C. V. Mosby, 1976.

Gickling, E. E., & Theobold, J. T. Mainstreaming: Affect or effect? Journal of Special Education, 1975, 9(7), 317-328.

Ginsburg, H., & Opper, S. Piaget's theory of intellectual development: An introduction. Englewood Cliffs, NJ: Prentice-Hall, 1969.

Glass, R. M., & Meckler, R. S. Preparing elementary teachers to instruct mildly handicapped children in regular classrooms: A summer workshop. Exceptional Children, 1972, 39(2), 152-156.

Grosenick, J. K. Integration of exceptional children into regular classes: Research and procedure. In E. Meyen, G. Vergason, & R. J. Whelan (Eds.), Alternatives for teaching exceptional children. Denver: Love, 1975.

Guilford, J. Psychometric methods. New York: McGraw Hill, 1954.

Harasymiw, S. J., & Horne, M. D. Integration of handicapped children: Its effect on teacher attitudes. Education, 1975, 96(2), 153-158.

Haring, N. G. Behavior of exceptional children (2nd ed.). Columbus, OH: Charles E. Merrill, 1978.

Haring, N. G., Stern, G. G., & Cruickshank, W. M. Attitudes of educators toward exceptional children. Syracuse, NY: Syracuse University Press, 1958.

Hathaway, W. Education and health of the partially seeing child (4th ed.). New York: Columbia University Press, 1959.

Hinshoun, A., & Burton, T. Willingness of regular teachers to participate in mainstreaming handicapped children. Journal of Research and Development in Education, 1979, 12(4), 93-100.

Irwin, R. B. As I saw it. New York: American Foundation for the Blind, 1955.

Johnston, W. A study to determine teacher attitude toward teaching special children with regular children. DeKalb, IL: Northern Illinois University, 1972. (ERIC Document Reproduction Service No. ED 065 950)

Jones, J. W. The visually handicapped child. Washington, DC: U.S. Government Printing Office, 1969.

Jones, J. W., & Collins, A. P. Educational programs for visually handicapped children. Washington, DC: U.S. Government Printing Office, 1966.

Jones, R. L., Gottleib, J., Giskin, S., & Yoshida, R. K. Evaluating mainstreaming programs: Models, caveats, considerations, and guidelines. Exceptional Children, 1978, 44(8), 588-601.

Jones, R. L., Lavine, K., & Shell, J. Blind children integrated in classrooms with sighted children: A sociometric study. New Outlook for the Blind, 1972, 66(2), 75-80.

Jordan, J. E., & Proctor, D. I. Relationships between knowledge of exceptional children, kind and amount of experience with them, and teacher attitudes toward their classroom integration. Journal of Special Education, 1969, 3(4), 433-439.

Kingsley, R. F. Prevailing attitudes toward exceptional children. Education, 1967, 87(5), 426-430.

Kirk, S. A., & Gallagher, J. J. Educating exceptional children (3rd ed.). Boston: Houghton-Mifflin, 1979.

Kuhn, J. A comparison of teachers' attitudes toward blindness and exposure to blind children. New Outlook for the Blind, 1971, 65(10), 337-340.

Kvaraceus, W. C. Acceptance-rejection and exceptionality. Exceptional Children, 1956, 22(3), 328-331.

LaBue, A. C. Teachers' classroom attitudes. Journal of Teacher Education, 1959, 10(4), 433-434.

Lennon, E. The partially seeing child in a school for the blind. New Outlook for the Blind, 1948, 42(4), 40-45.

Lowenfeld, B. History and development of specialized education for the blind. Exceptional Children, 1956, 23(1), 53-57.

Lowenfeld, B. The visually handicapped child in school. New York: John Day Co., 1973.

Major, T. How do we accept the handicapped? Elementary School Journal, 1961, 61(4), 328-330.

Mandell, C. J., & Strain, P. S. An analysis of factors related to the attitudes of regular classroom teachers toward mainstreaming mildly handicapped children. Contemporary Educational Psychology, 1978, 3(2), 154-162.

Mangold, S. The importance of precision teaching in the education of visually impaired students being mainstreamed into public schools: Part I. Education of the Visually Handicapped, 1978, 10(1), 1-10. (a)

Mangold, S. The importance of precision teaching in the education of visually impaired students being mainstreamed into public schools: Part II. Education of the Visually Handicapped, 1978, 10(2), 50-56. (b)

Martin, E. W. Some thoughts on mainstreaming. Exceptional Children, 1974, 41(3), 150-153.

Martin, G. J., & Hoben, M. Supporting visually impaired students in the mainstream. Reston, VA: The Council for Exceptional Children, 1977.

Miles, M. B. Innovation in education. New York: Bureau of Publications, Teachers' College, Columbia University, 1964.

Misbach, D. L., & Sweeney, J. Education of the visually handicapped in California public schools. Sacramento: California Department of Education, 1970.

Moore, J., & Fine, M. J. Regular and special-class teachers' perceptions of normal and exceptional children and their attitudes toward mainstreaming. Psychology in the Schools, 1978, 15(2), 253-259.

Oppenheim, A. M. Questionnaire design and attitude measurement. New York: Basic Books, 1966.

Orlansky, M. D., Fairchild, D. B., & Fairchild, T. N. Mainstreaming the visually impaired child: Blind and partially sighted students in the regular classroom. Austin, TX: Learning Concepts, 1977.

Panda, K. C., & Bartel, N. R. Teacher perception of exceptional children. The Journal of Special Education, 1972, 6(3), 261-266.

Pasanella, A. L., & Volkmer, C. B. Coming back . . . or never leaving: Instructional programming for handicapped students in the mainstream. Columbus, OH: Charles E. Merrill, 1977.

Pelone, A. J. Helping the visually handicapped child in a regular class. New York: Teachers' College, Columbia University, 1957.

Pelosi, J., & Hocutt, A. The Education for All Handicapped Children Act: Issues and implications. Chapel Hill: Frank Porter Graham Child Development Center, University of North Carolina at Chapel Hill, 1977.

Proctor, D. I. An investigation of the relationship between knowledge of exceptional children, kind and amount of experience, and attitudes toward their classroom integration. Dissertation Abstracts International, 1967, 28, 1721A. (University Microfilms No. 67-14, 538)

Ross, I. Journey into light. New York: Appleton, 1951.

Schmidt, L. J., & Nelson, C. C. Special class teacher attitudes toward affective and cognitive goals for visually handicapped students. New Outlook for the Blind, 1968, 62(10), 297-300.

Schmidt, L. J., & Nelson, C. C. The affective/cognitive attitude dimension of teachers of educable mentally retarded minors. Exceptional Children, 1969, 35(9), 695-701.

Scholl, G. T. Visually handicapped children in the regular classroom. Teacher, 1978, 95(6), 79-80.

Semmel, M. I. Teacher attitudes and information pertaining to mental deficiency: A comparison of regular grade and special class teacher responses to an attitude-information questionnaire. American Journal of Mental Deficiency, 1959, 63(4), 566-574.

Shotel, J. R., Iano, R. P., & McGettigan, J. F. Teacher attitudes associated with the integration of handicapped children. Exceptional Children, 1972, 38(9), 677-683.

Siegel, E. Special education in the regular classroom. New York: John Day Co., 1969.

Smith, H. P. Pioneer work in sight saving. The Sight Saving Class Exchange, 1938, 65, 2-14.

Vacc, N., & Kirst, N. Emotionally disturbed children and regular classroom teachers. The Elementary School Journal, 1977, 77 (4), 309-317.

Warren, S. A., & Turner, D. R. Attitudes of professionals and students toward exceptional children. The Training School Bulletin, 1966, 62(4), 136-144.

APPENDIX A

TEACHER ATTITUDE INVENTORY

Teacher Attitude Inventory

Below you will find a number of statements which deal with one's beliefs, attitudes or opinions about mainstreaming visually impaired students into regular classes. You will agree with some of them and disagree with others; from time to time you may feel uncertain whether you agree or not; then again, you may agree or disagree strongly.

Read each item carefully, then circle the symbol which best expresses your own view. Work as quickly as you can, without spending too much time on any one statement.

Your answers will be treated in the strictest confidence, and will only be analyzed statistically as part of a much larger number of investories.

SD	D	U	A	SA
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

1.	Visually impaired students should first turn to regular classroom teachers for academic assistance rather than to supportive staff.	SD	D	U	A	SA
2.	Visually impaired students should be enrolled in a regular classroom environment.	SD	D	U	A	SA
3.	On the whole, normally sighted students seem to be more intelligent than visually impaired students.	SD	D	U	A	SA
4.	Visually impaired students should only be mainstreamed into non-academic school activities (assemblies, lunch programs, recess, etc.).	SD	D	U	A	SA
5.	The itinerant/resource teacher is highly supportive of the regular classroom teacher.	SD	D	U	A	SA
6.	Regular classroom materials are adequate for teaching visually impaired students.	SD	D	U	A	SA
7.	The itinerant/resource teacher is readily accessible to the regular classroom teacher.	SD	D	U	A	SA
8.	The itinerant/resource teacher should have primary responsibility for the education of mainstreamed visually impaired students.	SD	D	U	A	SA
9.	One college level course in special education is adequate preparation for teachers having visually impaired students in their regular classes.	SD	D	U	A	SA

10. Inservice training and workshop programs related to visual impairments should be offered to regular class teachers of visually impaired students SD D U A SA

11. The specialized problems of visually impaired students necessitate their meeting different standards in the regular classroom. SD D U A SA

12. One should expect age appropriate behavior from visually impaired students. SD D U A SA

13. All teachers should be required to take at least one course in special education during their teacher preparation program. SD D U A SA

14. Teachers serving visually impaired students in regular classrooms value specialized supportive services. SD D U A SA

15. Specialized materials for use with visually impaired students are readily available to the regular class teachers. SD D U A SA

16. The communication between the regular class teacher and support personnel is usually constructive and helpful SD D U A SA

17. Special materials are required to teach visually impaired students. SD D U A SA

18. Placing visually impaired students in regular classes has a negative effect on the entire class program. SD D U A SA

19. Visually impaired students should be placed in a school building with normal students, but should be in a special wing which serves only exceptional students. SD D U A SA

20. The regular classroom teacher is as responsible for the visually impaired student as the support staff. SD D U A SA

Background Information

21. What grade level do you teach? elementary_____; junior high school_____; senior high school_____.

22. Have you previously taught a visually impaired student? yes_____; no_____.

23. Have you taken course work in the area of special education? yes_____; no_____.

24. What is your sex? female_____; male_____.

Recommendations or Suggestions

25. What specific or broad suggestions or recommendations do you have to (a) improve the quality of education of visually impaired students, and (b) to make mainstreaming these students an easier experience for regular classroom teachers?

APPENDIX B

COVER LETTER SENT TO REGULAR CLASSROOM TEACHERS

Dear Teacher:

Although a great deal of research has been conducted concerning mainstreaming and its effect on students, little research has focused on the attitudes of regular classroom teachers toward this policy. Many people have spoken about teacher beliefs and needs related to mainstreaming, however, we really have little information from teachers on these matters. It is only with the cooperation of teachers like you, who are in the midst of educating exceptional students in your classes, that we can better understand this educational alternative.

I am conducting, as part of my doctoral program, a study to learn more about regular classroom teachers' attitudes toward mainstreaming visually impaired students. This study has been fully approved by the Greensboro Public Schools. It is believed that this is an important area which is in need of investigation and that the findings will be beneficial to all of us who are involved in the education of children. I would greatly appreciate your participation in this project.

If you would, please complete the enclosed form and return it to me in the stamped self-addressed envelope by Friday, May 16, 1980. It would be appreciated if, when you return the completed form, you would at the same time mail separately the enclosed postcard indicating that you consent to participate in this study and whether you wish to receive a summary report of the study's findings. If you would like a copy of this report one will be sent to you upon completion of the study.

Let me assure you that your replies will be kept completely confidential and that this information will not lead to further contacts by other organizations. The responses from all participants will be combined to give an overall picture of regular class teachers rather than of any particular teacher.

Your cooperation in helping to gather this information will be greatly appreciated.

Sincerely,

Bruce Roscoe
Doctoral Candidate

Helen Canaday
Professor, Home Economics
Dept. of Child Development/
Family Relations

APPENDIX C

RETURN POSTCARD

I, _____, voluntarily consent to participate in this research.

_____ I want a summary report of the study sent to me.

_____ I do not want a summary report of the study sent to me.

APPENDIX D

FOLLOW-UP NOTICE

Dear Teacher:

Recently you received a questionnaire for teachers of mainstreamed visually impaired students. Completion of the questionnaire is very important in our pursuit to better understand the beliefs and needs of teachers who are currently involved in teaching these students

Because of the anonymity of the instrument it is impossible for us to determine who has or has not returned the instrument. If you have already returned the questionnaire, please disregard this reminder and thank you for your cooperation. If you have yet to return the completed instrument it would be greatly appreciated if you would do so as soon as possible.

Sincerely,

Bruce Roscoe

Principle Investigator