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**AN ASSESSMENT OF THE RELATIONSHIPS BETWEEN SELECTED
TEACHER CHARACTERISTICS AND ATTITUDES OF REGULAR
CLASSROOM TEACHERS TOWARD MAINSTREAMING**

by

Dorothy Mary Elkins

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership

Western Michigan University
Kalamazoo, Michigan
April 1983

AN ASSESSMENT OF THE RELATIONSHIPS BETWEEN SELECTED
TEACHER CHARACTERISTICS AND ATTITUDES OF REGULAR
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Dorothy Mary Elkins, Ed.D.

Western Michigan University, 1983

A descriptive study was conducted to investigate the relationship between regular classroom teachers' attitudes toward accepting handicapped pupils into their classrooms and the following factors: (a) the teacher's age, sex, academic preparation, and professional experience, (b) grade level taught, and (c) the teacher's perception of potential help available. The investigator also surveyed the opinions of these teachers about: (a) the types of handicapping conditions considered most and least acceptable and (b) the effectiveness of various incentives as inducements to enhanced acceptance of handicapped pupils into their classrooms. Data were gathered using the Attitude Regarding Mainstreaming Survey (ARMS), which was developed for this purpose. The ARMS was distributed to 450 regular classroom teachers in Macomb County, Michigan.

Based on findings from analyses of data obtained from the 336 teachers who completed the questionnaire, it was determined that significant relationships exist between a teacher's attitude toward mainstreaming and each of the following: (a) the age of the teacher, (b) the total number of years of teaching experience, (c) the number of years of mainstreaming experience, (d) the number of years of experience teaching only non-handicapped pupils, and (e) the

teacher's perception of help available. According to the results of the opinion surveys, hearing impaired and speech impaired pupils were considered most acceptable, while those classified as deaf, blind, and emotionally impaired were rated least acceptable. The incentive judged most effective as an inducement to enhanced acceptance of mainstreaming was reduced class size.

While respondents expressed fairly positive attitudes about the mainstreaming philosophy and handicapped pupils, their responses to questions about their own competency and responsibilities in implementing mainstreaming programs were quite negative. Many of the respondents expressed: (a) the need for stronger support from and coordination with special education personnel, (b) concern over the "efficacy" of mainstreaming, suggesting that perhaps the education of the handicapped is best left to trained special educators, and (c) a belief that special education personnel are not always willing to accept their share of mainstreaming responsibilities. These findings hold serious implications for administrators and special education personnel, since it is they to whom these regular classroom teachers must turn for the support they seek in dealing with the handicapped.

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Dorothy Mary Elkins

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CHAPTER I

THE PROBLEM AND ITS BACKGROUND

Historical Perspective

Throughout human history the problems and plights of the handicapped have been identified, studied, and analyzed--sometimes sympathetically and realistically, sometimes callously and with suspicion or superstition (Hewett, 1974). Falling outside the sphere of "normalcy," the handicapped have traditionally been isolated from society in general and from education in particular. Even with the advent of educational programs designed specifically for the handicapped, these individuals were still denied access to the regular classroom. These special education programs, which began to evolve mainly during the early twentieth century, were sporadic and generally met with only limited success. Gearheart (1980) notes that it has just been within the last decade that serious attempts have finally been made to integrate the handicapped into the "normal" classroom.

Believing that a society should provide the conditions which eventually permit a person to function as normally as possible unless he/she deliberately chooses to be deviant, Wolfensburger (1972) formulated certain principles of "normalcy." Implied in his principles is the obligation of educational systems to offer the handicapped, to the maximum extent possible, the opportunity to be assimilated into a prevailing society in which people of various abilities, talents, and

intellectual capacities work side by side in a spirit of cooperation and acceptance of differences. Even before Wolfensburger, others had expended considerable effort researching the efficacy of special class placement as opposed to placement in regular classes. Such research was conducted by Cassidy and Stanton (1959), Diggs (1964), Hoelke (1966), Johnson (1950), and Smith and Kennedy (1967).

Research findings led parents, advocates, and the handicapped themselves to begin questioning the "benefits" derived from special schools and/or self-contained classrooms, particularly for those labeled educably mentally retarded, emotionally impaired, or learning disabled. Jones and MacMillan (1974) maintained that facilities such as these were never intended to be "dead-ends" in themselves, but had been established as mere "preparation grounds" for the development of skills which would permit eventual return to regular classrooms of the mildly to moderately disabled. However, alternatives to segregated facilities were then, and still are in many cases, little more than lofty dreams (Reynolds & Rosen, 1978). In an effort to make them a reality, concerned parents and community members have turned to the courts and Congress in an attempt to make their needs known (Kreinberg & Chow, 1979; Martin, 1976; Reynolds, 1976).

Prodged by numerous adverse court decisions, such as Hobson vs. Hansen in 1967, Diana vs. State Board of Education (California) in 1970, and Stewart vs. Phillips in 1970, many states began to change their own constitutions to provide more comprehensive educational opportunities for special needs students (Gearheart, 1980).

Finally, in 1973, Congress passed Public Law 93-112, known as

the Rehabilitation Act of 1973, which provided that:

(1) to the maximum extent appropriate, handicapped children . . . are (to be) educated with non-handicapped children, and (2) special classes, separate schooling or other removal of handicapped children from the regular educational environment occurs 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. (Section 504)

Two years later, Congress passed PL 94-142, mandating that the education of each handicapped student take place, to the greatest extent possible, in the "least restrictive environment." It is the concept implied in these laws which has come to be known as "mainstreaming."

Statement of the Problem

In theory, it might be implied from such legislation as that cited, that the only real difficulties entailed in placing the handicapped into the regular classroom to the "maximum extent appropriate" are those which involve funding, such as transportation, additions and/or alterations to physical facilities, and personnel hiring and/or training. In practice, nonetheless, while "integration may be imposed by binding laws, the manner in which the regular classroom teacher responds to the needs of the special child may be a far more potent variable in determining the success of mainstreaming than is any administrative or curricular scheme" (Larrivee & Cook, 1979). The central problem faced by school officials in planning special education programs, therefore, could well be their lack of knowledge of how their teachers will respond to special children placed

in their classes; i.e., whether or not they--en masse, in groups, or individually--will readily accept these children; and, if not, how strong their resistance might be, and which among them are most resistant. For, if school officials do not know in advance how their teachers will react toward handicapped students, they could wastefully spend time, energy, and money trying to counter anticipated resistance which might never materialize or by directing such efforts toward the wrong group(s). It is precisely this problem that is addressed in the present study.

Since teacher attitudes are a critical part of mainstreaming, it is crucial that administrators and special educators realize the extent to which classroom teachers will support or resist the implementation of any special education programs in which they are required to participate. Nonetheless, aside from the few studies to be mentioned, far less attention has been given to the attitudes and perceptions of educators toward the handicapped and mainstreaming than to the skills and competencies needed to teach the handicapped in mainstreamed settings (Alexander and Strain, 1978).

The first step in gaining the cooperation of classroom teachers in the mainstreaming process is to assess their current perceptions, expectations, and fears, and then, based on this assessment, to plan appropriate courses of action. Efforts can be made to allay undue fear and apprehension and to clear up misconceptions through the dissemination of pertinent information, in-service training, encouragement of continuing education and the like; the aim being to foster positive attitudes toward and willing acceptance of the handicapped.

Presumably, improved teacher understanding would then lead to the establishment of an accepting, non-threatening environment for the special needs students themselves.

Recently, such researchers as Berryman and Berryman (1981), May and Furst (1977), and Schwartz (1979) have encountered both positive and negative reactions toward mainstreaming among classroom teachers who are or will be implementing these programs. In responding to a 1979 National Education Association (NEA) survey on how special education laws should be implemented, teachers indicated that: (a) they should play more prominent roles in determining the content of service programs, (b) very few, if any, emotionally disturbed, socially maladjusted, or mentally retarded pupils should be mainstreamed, (c) the amount of paperwork should be reduced and more time made available to classroom teachers to prepare Individualized Educational Plans, etc., (d) a formula should be used to reduce the total number of pupils in a class into which handicapped pupils are placed, and (e) teachers of handicapped pupils should have the right to request reassignment of any pupil if he/she believed that the pupil had been inappropriately placed (Cortright, 1979).

In 1979, Hudson, Graham, and Warner reported that approximately 33 percent of the teachers questioned in a survey voiced the opinion that the presence of one exceptional student would be detrimental to the classroom, and 67 percent viewed special class placement as academically better for special need students than regular class placement. Other investigators, including MacMillan, Jones, and Alioa (1974); Martin (1976); and Stephens and Braun (1980), found that

although classroom teachers were not supporters of mainstreaming, they would still be willing to provide services if they received the training and assistance needed to overcome their apprehensions and feelings of inadequacy.

Purposes of the Study

If regular classroom teachers do differ in their acceptance of mainstreaming, then, as pointed out in the problem statement, school officials need to know where the differences lie. The primary purpose of this study is to provide officials with: (a) a description of regular classroom teachers' attitudes toward accepting handicapped pupils into their classrooms, and (b) evidence of relationships which might exist between these attitudes and the factors of age, sex, grade level taught, academic preparation, professional experience, perception of potential help available, type of handicapping condition, and incentives offered to increase the willingness of teachers to accept such pupils. It should be possible for officials to use the findings from this study to facilitate planning and implementation of their mainstreaming programs.

While it is true that most of these factors have been previously studied, many researchers have reported conflicting and/or inconclusive findings. Moreover, as far as can be determined, no one has thus far addressed two of these factors, i.e., perception of potential help available and incentives. The present study was designed to resolve questions of conflict and ambiguity and to develop information on the two unexplored areas noted above.

Significance of the Study

With the passage of state and federal laws regarding mainstreaming, increased placement of mildly and moderately handicapped pupils into regular classes has become a reality (CSLC, 1979). MacMillan & Semmell (1977) proposed that, "the question is no longer whether to mainstream, but rather how most effectively to mainstream" (p. 1). This question cannot be answered without taking a closer look at the personnel directly involved in the educational effort, for the success or failure of the mainstreaming process depends, in large part, upon the attitudes of these teachers (May and Furst, 1977). With this in mind, it is the responsibility of administrators and special educators to recognize the fears, concerns, and feelings experienced by classroom teachers, in hope of replacing negative attitudes with more positive ones. By reviewing the findings from the present study, these administrators and special educators may gain insight into the nature of these fears, concerns, and feelings.

Theoretical-Operational Definitions

To clarify terminology used in the research problem statement, the following definitions are provided.

Attitude. An attitude is a mental or neutral state of readiness, organized through experience, exerting an influence on an individual, which is either directive or dynamic in nature (Allport, 1935). Attitudes toward mainstreaming were measured by the responses to items numbered 9 through 48 on the questionnaire discussed in Chapter III.

Regular Class Placement. Regular class placement (general education) refers to all public school education other than special education programs and services (Michigan Special Education Code, R 340.1701, part 10).

Handicapped. A handicapped pupil is any person between the ages of birth and twenty-five who meets the state and federal eligibility criteria for receiving special education services (Michigan Special Education Code, R 340.1702).

Least Restrictive Environment. Least restrictive environment is the term used to indicate the type of services, programs and/or placement which will allow handicapped children to be placed where they can obtain the best education at the least distance away from the mainstream of society (Molloy, 1974). Operationally, this means placing such children in the mainstream.

Mainstreaming. Mainstreaming is the instruction of students within the regular education setting (Keogh & Levitt, 1976, p. 2).

Special Education. Special education consists of programs and services designed to develop the maximum potential of each handicapped person (Michigan General School Laws, 1976, parts 380.1701-380.1703, 380.1711-380.1743, and 380.1751-380.1766).

Limitations of the Study

Since it would be impractical to study all possible variables affecting teacher attitudes about mainstreaming, the present investigator restricted the study to an examination of factors which relate directly to the teacher him/herself, rather than to the school system

as a whole. The purpose for this was two-fold: first, the teachers could be expected to articulate more clearly attitudes which relate to problems directly affecting them, as opposed to phenomena which are more distant and less understood (e.g., budgetary, political, and other constraints facing school boards); and secondly, the results could be used by officials to focus on methods of replacing negative teacher attitudes with more positive ones and/or by making certain adjustments in departmental policies relating to teacher relations. Some important variables, such as the demographics of the community (urban vs. rural vs. suburban, etc.), school environment (building structure, size, physical layout, etc.) and the most severe handicapping conditions (severe mental retardation, multiple handicaps, etc.), were not addressed.

Caution must be exercised in attempting to generalize these findings to all school districts. Since the sample for this study was confined to the Macomb Intermediate School District, generalization of the findings could be less applicable the more populations vary from that of Macomb County, Michigan, described in Chapter III.

While it is acknowledged that prejudice and apprehension toward the handicapped are often experienced by nonhandicapped students, parents, community members, and society as a whole, these variables were not investigated in this study.

Overview of the Dissertation

The remainder of this dissertation is organized as follows. Chapter II is a review of literature relevant to mainstreaming and

of studies conducted thus far to measure the attitudes of regular classroom teachers toward the concept. Based on this review, eight research hypotheses were developed to test the relationships to be studied. In Chapter III, a research question is introduced, the design for testing this research question and the eight research hypotheses is discussed, population and sample described, instrument development and validation procedures described, and data collection techniques and statistical analyses outlined. Findings from the various analyses of data are presented in Chapter IV. In Chapter V, a summary of the study is offered, conclusions and inferences are drawn, and recommendations are made.

CHAPTER II

REVIEW OF RELATED LITERATURE

Education of the Handicapped

We currently find ourselves in the midst of a dynamic period in the history of special education for the handicapped (Kreinberg & Chow, 1979; Martin, 1976; and Pasanella & Volknor, 1981). The impetus for the rapid and significant change marking this period, which started approximately a decade ago and which is still unfolding, has been numerous court decisions (see "Litigation" section of this chapter) dealing with human rights and the dissatisfaction of many educators, advocacy groups, parents, and the handicapped themselves with the inability of communities to provide truly equal access to educational opportunities for all their citizens.

This period has been characterized by close scrutiny of two broad categories of issues: (1) the efficacy of separate facilities and special class placement, as studied by Bacher (1965), Baldwin (1958), Blatt (1958), Cassidy and Stanton (1959), Diggs (1964), Elenbogen (1957), Goldstein, Moss and Jordan (1964), Kern and Pfaffle (1963), Mayer (1966), Thurston (1959), and others; and (2) the psychological and sociological effects of labeling, which were investigated by Birch (1975), Dunn (1968), Hobbs (1974), Payne and Mercer (1975), and others.

In this chapter, the history of special education, up through

and including the aforementioned period, will be reviewed, the concept and historical development of "mainstreaming" will be described, and one of the most crucial elements (according to Berryman and Berryman, 1981) in the implementation of mainstreaming--the role of the teacher--will be examined. Major problems faced by the teacher in meeting the needs of special students integrated into their classrooms will be identified.

Historical Perspective of Special Education

As indicated in the "base chronology" (see Appendix A for complete derivation), in terms of both time and location, the history of the treatment and education of the handicapped has been characterized by dramatic extremes. Hewett (1974) described four basic historical "determiners" relevant to attitudinal development and courses of action taken in dealing with persons considered "seriously defective." First was a "survival determiner", characterized by a harsh physical environment, infanticide, and severe treatment. Second was a "superstition determiner", involving irrational beliefs in witches, demons, gods, etc. Third was a "scientific determiner", referred to in terms of objective observation, research, and natural explanation. Fourth was a "service determiner", involving social acceptance, care, humane treatment, and education. During each period of history, each determiner was decided by "nature, irrational and rational beliefs, social and economic conditions, religion, law, and, finally, by knowledge" (Hewett, 1974, p. 11).

Throughout both the Greek and Roman periods, attitudes of the

populace toward the handicapped were strongly influenced by whomever was in power at a given time. Thus, practices varied as widely as did the personal inclinations of individual rulers. Even with the spread of Christianity, the pendulum's swing did not significantly alter, since the Church advocated, on the one hand, humane acceptance of the unfortunate, while on the other it vigorously attacked the heresies of witchcraft, demonology and a strong belief in evil (Gearheart, 1980).

The advent of the French Revolution in 1789 and its subsequent awakening of a sense of social responsibility, coupled with a new era of "scientific investigation", caused the pendulum to slowly swing in the direction of science and service (Hewett, 1974). The first public schools for deaf and blind children began to appear about this time (Pritchard, 1963). Still, other more disabling handicapping conditions remained in the background until the discovery of the "Wild Boy of Aveyron" and the subsequent recordings of attempts to educate him made by Jean Marc Gaspard Itard (Itard, 1962). Although Itard considered himself a total failure in this endeavor, his diary did pave the way for a new outlook on the mentally retarded.

The nineteenth century could well be termed the era of institutions for the deaf and dumb, the blind, the emotionally impaired, and the mentally retarded (Gearheart, 1980), since such facilities began to flourish in both Europe and the United States during that period. These facilities served persons having a variety of handicapping conditions, including blindness, deafness, mental retardation, and mental illness. Wiederholt (1974) reported that, as early as 1802, a

"new" disability was first recognized by a Viennese physician, Franz Joseph Gall. Later it was called "specific learning disability", a term describing a broad category of disorders involving language, reading, speech, auditory skills, perception, numbers conceptualization, motor development, or any combination of same.

The period from 1900 to the mid 1970's might appropriately be referred to as the "era of special classes," due in large part to litigation and legislation in the area of institutional segregated placement, which, by the end of the 1950's, began to evoke very negative images in the minds of many. As indicated by Gearheart (1980), although some states and localities provided itinerant services to special needs students in an attempt to educate them within the regular school setting, the scope of such services varied from one geographic area to another and lacked any true consistency. The period from the beginning to mid twentieth century was characterized by a rapid decrease in institutionalization, especially for the mildly handicapped and an accelerated growth in special class placement enabling the special student to be "within" the circle of normalcy, but sufficiently apart to remain unobtrusive. Yet, the pendulum continued to swing. With a new sense of urgency and purpose, advocates of the handicapped moved forward in the direction of the "least restrictive" educational placement and into the era of mainstreaming.

Mainstreaming

A consensus on a suitable definition for the educational phenomenon referred to as "mainstreaming" has, to this point, never been

reached (Beery, 1972; Birch, 1974; Kaufman, Gottlieb, Agard, & Kukic, 1975; MacMillan, Jones, & Meyers, 1976; & MacMillan & Semmel, 1977).

The term does not appear in any federal regulations, even in those governing the implementation of Public Laws 93-112 and 94-142, which specifically deal with the concept of mainstreaming (Pasanella & Volknor, 1981).

Definition of Mainstreaming

Many school districts have developed their own definitions of mainstreaming. According to Gearheart (1980), most definitions seem to incorporate the following common elements:

Mainstreaming refers to a continuum of services which handicapped youngsters may receive in regular school settings and which:

- †Are based on the educational needs of the children
- †Provide coordinated services from classroom teachers, resource room teachers, itinerant teachers, and other ancillary personnel, as an aspect of shared responsibility
- †Provide individual educational management plans for each handicapped child through cooperative team planning, including the development of structured learning environments for those with intensive needs
- †Provide the most appropriate education for each child in the least restrictive setting (in other words, as much time as possible participating in the regular program)
- †Provide the multiple opportunities for a child whose educational needs may change
- †Enable a special education resource room teacher to service a child a minimum of one unit of time (for example, half an hour); or as much as a majority of the day while the need is intensive. For example, at the beginning of a year, one child may be spending 90% of

the day in a resource room, three may spend 40%, while others may be spending less than 10% of their time in the resource room.

Mainstreaming does not mean:

†Return of all handicapped children to regular classes

†Permitting children with special needs to remain in regular classrooms without the support services that they need

†Elimination of centers, wings, units, classes, and non-public schools for youngsters with handicaps so severe that they cannot benefit from a regular school setting and/or program. (pp. 65-66)

Such a definition, however specific, is cumbersome. For all practical purposes, the law does refer indirectly to mainstreaming in terms of education in the "least restrictive environment," i.e., that all "handicapped children should be placed where they can obtain the best education at the least distance away from mainstreamed society" (Molloy, 1974, p. 5). In very simple terms, the intent and scope of much special education legislation is explained in this definition.

Litigation

Kreinberg and Chow (1979) observed that only in recent years have the courts offered any recourse to parents or advocates of the handicapped who are dissatisfied with the quality and/or quantity of services and/or programs available to special education students. As a by-product of the Civil Rights movement, which was most directly concerned with racial equality, the rights of the handicapped began to be asserted when the broader movement forced changes in laws and pressured courts to interpret existing laws in a manner which placed

prime importance on the rights of the individual. As early as 1954, a legal precedent was set when the U.S. Supreme Court ruled in Brown vs. the Board of Education (1954), that education is a right. Testimony in this case pointed out that all children can benefit from education.

Another case, Hobson vs. Hansen (1967), established a precedent for declaring illegal any tracking system. The following year, in Arreola vs. Board of Education (1968), the courts recognized the role of parental participation in educational placement decisions (Kreinberg and Chow, 1979).

Gearheart (1980) cites three significant 1970 decisions which likewise dealt with the rights of the handicapped:

1. Diana vs. State Board of Education (1970) mandated that special education placement may not violate a student's rights.
2. Stewart vs. Phillips (1970) established a "Commission on Individual Educational Needs" to oversee evaluation and programming for special education students.
3. Spangler vs. Board of Education (1970) banned discrimination of "interclass grouping" based on intelligence tests and teacher recommendations.

Although several court cases involving the rights of the handicapped to a free access to public education have been decided during the ensuing years, only two are considered landmarks in the area of special education. The first, Pennsylvania Association for Retarded Children (PARC) vs. Commonwealth of Pennsylvania (1971), resulted in the State of Pennsylvania being ordered to provide all retarded

persons between the ages of 6 and 21 years access to public school education, training appropriate to his/her learning ability, and a suitable educational program. The second case, Mills vs. D. C. Board of Education (1972), is of prime importance since it was the first decision to apply to all handicapped students. It also affirmed the constitutional right of all children to access to free public education, due process, and equal protection under the law (Stephens, Blackhurst, & Magliocca, 1982).

Federal Legislation

Significant federal legislation regarding education of the handicapped can be summarized as follows:

Fourteenth Amendment (1868)--established the rights of citizens.

Public Law 85-926 (1958)--provided funds to train teachers of the mentally retarded.

Public Law 88-164 (1963)--provided funds for training personnel to serve those afflicted with other major handicapping conditions besides mental retardation.

Public Law 89-10 (1965)--(The Elementary & Secondary Educational Act of 1965) provided substantial funds to establish better educational opportunities for educationally disadvantaged students.

Public Law 89-750 (1966)--added Title VI to Public Law 89-10, thus establishing both the Bureau of Education for the Handicapped and the National Advisory Committee on Handicapped Children.

Public Law 91-230 (1969)--added learning disabilities to the list of handicapping conditions.

Public Law 93-112 (1973)--Section 504 of this Act forbids discrimination in education and/or employment because of a handicap.

Public Law 93-380 (1974)--directed all states to plan for all handicapped students.

Public Law 94-142 (1975)--could well be likened to a "bill of rights" for the handicapped. It includes provisions for: (a) access to free appropriate education, (b) individual education programs, (c) least restrictive environment, (d) non-discriminatory evaluation, and (e) impartial due process hearing.

Efficacy and Sociometric Studies

Birch (1978) noted that the concept of mainstreaming is of such recent origin that, as noted in the previous section, a universal definition has not yet been accepted, nor has the entire scope and direction of its concept been determined. As nearly as can be established, the seeds of mainstreaming were planted during the mid twentieth century with the emergence of the so-called efficacy studies (see below). While dealing predominantly with the mentally retarded, these studies have also had considerable influence on the educational placement of students with other handicapping conditions as well.

When Skeels and Dye (1939) published the finding from their initial investigations, they significantly influenced public opinion with regard to the mentally retarded and the influence of environmental stimulation on the education of these individuals. Prior to this period, mental retardation had been seen as an irreversible condition, beyond hope of improvement, and, therefore, as a situation on

which it would be wasteful to expend public funds. In most cases, institutionalization, with very few or no educational components, was viewed as the only logical placement for such persons.

In an effort to test these beliefs, two types of studies--both efficacy (the power to produce a desired or intended result; Webster, 1971) and sociometric (concerned with interrelationships of individuals within a social group; Webster, 1971)--were undertaken. But, rather than proving or disproving the beliefs, they merely produced conflicting results. On the one hand, the efficacy studies of Bennett (1932), Cassidy and Stanton (1959), Elenbogen (1957), Goldstein, Moss, and Jordan (1964), Pertsch (1936), Smith and Kennedy (1967), Thurston, 1959, Walker (1974), and others suggested that: (a) educable mentally retarded pupils in special education classes do not show significantly higher achievement than similar pupils in regular classrooms, and (b) those pupils receiving individual instruction showed significantly higher achievement than that of their counterparts who did not receive such instruction. One major rationale for special education placement had been the ability of special education teachers to more readily individualize instruction because of low pupil-teacher ratios, but this argument was contradicted by the efficacy studies.

It was revealed in sociometric studies, on the other hand, that segregated mentally retarded students were rated higher in social adjustment than were similar students in regular classes. Most of these studies were conducted between 1932 and 1970, by people such as Baldwin (1958), Bennett (1932), Elenbogen (1957), Hoelke (1966),

Johnson (1950), Kern and Pfaeffle (1963), Porter and Melazzo (1958), and Thurston (1959). In sociometric studies conducted since 1970, however, Budoff and Gottlieb (1976) and Haring and Krug (1975) have shown that superior social adjustment has been made by the integrated mentally handicapped.

While the methodology and research design of the efficacy studies have been severely criticized by authors such as Kaufman, Semmel, and Agard (1977), Keogh and Levitt (1976), MacMillan and Becker (1977), and Robinson and Robinson (1976), a reawakening and a rethinking of previously accepted concepts regarding educational placement of the handicapped has resulted from these investigations. As a result of these studies, it became readily apparent that there was a need for: (a) a broader array of special services to support the exceptional child, (b) nondiscriminatory testing techniques, (c) reduced reliance on labeling, and (d) parental participation in decisions which affect placement of their own handicapped children (Stephens, Blackhurst, & Magliocca, 1982, p. 7).

It was the combined influence of the aforementioned litigation, legislation, and efficacy and sociometric studies which led to the development of the mainstreaming philosophy of equal access to educational opportunities for the handicapped and non-handicapped alike.

Teacher Attitudes Toward Mainstreaming

No one can deny that the classroom teacher is indeed very often the pivotal person in the student's instructional program and can be considered a critical factor in the ultimate success of that program

(Guerin & Szatlocky, 1974). There is substantial evidence, nonetheless, that many regular classroom teachers possess negative attitudes about the mainstreaming concept (Bradfield, Brown, Kaplan, Richert, & Stannard, 1973; Gickling & Theobald, 1975; Jones, Gottlieb, Gusking, & Yoshida, 1978; MacMillan, Jones, & Meyer, 1976; Meyers, Sundstrum, & Yoshida, 1974; and Shotel, Iano, & McGettigan, 1972).

Alexander and Strain (1978), Haring, Stern, and Cruickshank (1958), Johnson and Cartwright (1978), and Martin (1974) all suggested that considerable research and development are needed to improve the involvement of regular educators in the mainstreaming process in order to cultivate more positive attitudes toward integration.

In an attempt to pinpoint those variables which most influence teacher attitudes toward mainstreaming, investigators have conducted studies to measure the effects of such factors as sex, age, level of education, and years of teaching experience on teachers' attitudes about mainstreaming. While Ringlaben and Price (1981) and Stephens and Braun (1980) report no relationship between these variables and teacher attitudes, research by Harasymiw and Horne (1975), Haring (1957), and Shotel, et al. (1972) failed to produce conclusive results, negative or positive. Other influences, such as types of handicapping conditions, have also been examined, but again, with inconclusive results. While Davis (1980) and Williams and Algazzone (1979) reported that regular education teachers expressed deepest concern over the integration of the mentally retarded into their classrooms, Seil (1980) presented evidence that the emotionally

impaired student was rated least preferred for integration. In re-searching the relationship between grade level and teacher attitude, it was maintained by Hudson, Graham, and Warner (1979) that teaching level did not affect attitude, while Kavale and Rossi (1980) reported that middle school teachers were less favorable toward mainstreaming than were elementary or secondary level teachers. On the other hand, Stephens and Braun (1980) found that teachers of primary and middle grades reported more positive attitudes toward the integration of handicapped students than did their counterparts at the secondary level.

Obviously, there is a great deal of controversy with regard to which variables affect teacher attitudes about mainstreaming and the manner in which more positive attitudes might be fostered. On one principle, several researchers seem to agree; i.e., if mainstreaming is to be effective, the degree to which regular classroom teachers are willing to accept handicapped pupils into their programs must be improved. That, as Kraft (1972) noted, is the goal of administrators and special educators in helping teachers of such classes cope with--and want to cope with--the handicapped. To achieve that goal, special educators and classroom teachers must pool their efforts and work cooperatively to provide the most appropriate education for all students (Cegelka & Tyler, 1970; Kavanaugh, 1977; Laurie, Buchwack, Silverman, & Zigmond, 1978; Myers, 1978). The present study was undertaken to provide heretofore unavailable information about those factors which significantly affect teacher attitudes toward mainstreaming.

Summary

Through this review of literature the following background has been provided: (a) an historical perspective of special education, (b) an update on the current status of mainstreaming in American education, (c) a discussion of litigation and legislation which led to the passage of Public Law 94-142, the highlight of the mainstreaming movement, and (d) an overview of those studies located thus far in which prior attempts were made to measure teacher attitudes about mainstreaming and the effects of those attitudes on the teachers' cooperation in the process itself.

From this review, the investigator has concluded that although the mainstreaming process itself has been much studied, research into the effects of this process on those who must accept handicapped students into their classrooms--teachers themselves--has been extremely limited (Alexander and Strain, 1978; Berryman and Berryman, 1981; and others). Nonetheless, several research hypotheses regarding the relationship between teacher attitudes about mainstreaming and specific factors were identified from the literature; these hypotheses are introduced and discussed below.

Hypothesis 1. There is a relationship between a teacher's attitude toward the mainstreaming of handicapped pupils into his/her classroom and the teacher's age (Berryman & Berryman, 1981; Buletza, 1979; and Schwartz, et al., 1979).

Hypothesis 2. There is no difference between male and female teachers with regard to their attitudes toward accepting handicapped

pupils into their classrooms (Berryman & Berryman, 1981; Buletza, 1979; Ringlaben & Price, 1981; Schwartz, et al., 1979; Stephens & Braun, 1980).

Hypothesis 3. There does not appear to be any relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the grade level taught by the teacher (Buletza, 1979; Hudson, Graham, & Warner, 1979; and Ringlaben & Price, 1981).

Hypothesis 4. There is no relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the teacher's level of education (Hudson, Graham, & Warner, 1979; Ringlaben & Price, 1981).

Hypothesis 5. There is no relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of special education courses taken by the teacher (Ringlaben & Price, 1981; and Schwartz, et al., 1979).

Hypothesis 6. There is no relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of years the teacher has taught (Berryman & Berryman, 1981; and Stephens & Braun, 1980).

Hypothesis 7. There is a relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of years the teacher has taught mainstreamed classes (Buletza, 1979; and Schwartz, et al., 1979).

Hypothesis 8. While the investigator encountered no previous research specifically dealing with the relationship between teacher attitudes about mainstreaming and the length of time the teacher has

only taught non-handicapped pupils, it seemed that a logical corollary to hypothesis 7 is: There is a relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of years the teacher has taught solely non-handicapped pupils.

These hypotheses were incorporated into a research project undertaken by the investigator to study factors affecting teacher attitudes about mainstreaming. The design and methodology of this study are presented in Chapter III.

CHAPTER III

DESIGN AND METHODOLOGY

In undertaking the present study, the investigator endeavored to determine if the attitudes of regular classroom teachers toward mainstreaming are influenced by any or all of the four following factors: (a) teacher demographics (i.e., commonalities among those who are more accepting of, or more resistant to, mainstreaming); (b) the specific type of handicapping condition encountered by the teacher; (c) the availability of incentives offered to them to enhance their acceptance of mainstreamed pupils; and/or (d) their perception of potential help available in coping with handicapped pupils.

The first step in this investigation was a review of literature. As indicated in Chapter II, this review led to the identification of eight research hypotheses, all of which relate to teacher demographics. With regard to the types of handicapping conditions teachers are most and least willing to accept, the literature review revealed that, while some research had previously been done, findings were inconclusive (Harasymiw & Horne, 1975; Ringlaben & Price, 1981; Stephens & Braun, 1980; and others). The investigator found no evidence of prior research into the existence and/or effectiveness of incentives used to enhance acceptance of mainstreaming.

Despite an exhaustive search of the literature, very little evidence of prior research was uncovered regarding the fourth area of interest in the present study, i.e., the relationship between regular

classroom teachers' attitudes about mainstreaming and the quantity, quality, and nature of help which they perceive as available to them in coping with handicapped pupils. Thus, there was little basis for stating a formal research hypothesis with regard to this relationship. It was therefore necessary for the investigator to formulate a research question to be used in testing data obtained from the survey to be conducted.

Research Question. Based on personal observation during her six years as a special educator, the investigator posed the following question: Is there a relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the potential help the teacher perceives as being available?

In formulating the eight research hypotheses, attempts were made to identify those teachers who are more supportive of or more resistant to mainstreaming, thus possibly helping officials plan how to react to this support or resistance. By contrast, the research question regards a factor upon which these officials can act. Whereas a teacher's sex or age cannot be changed, perceptions of inadequate support can be positively modified by altering school policy or merely revising a few practices.

Whereas the technique used to investigate the eight hypotheses and the research question involved statistical testing of data, the examination of the impact of handicapping conditions and incentives on teacher attitudes was confined to a survey of respondent opinions. Thus, the data relating to these factors were not subjected to statistical treatment, but were compiled in raw form.

In this chapter the steps taken to conduct this research are outlined. First, there is a description of the population from which the sample was drawn and of the method of sample selection used; second, the instrumentation used to operationalize the variables under examination is described; third, there is a discussion of the methods used to validate the questionnaire and determine reliability norms; fourth, there appears a discussion of the pilot study and the impact of that study on the formal administration of the questionnaire; and, finally, a review of the process by which the data were collected and analyzed is presented.

Population and Sample

The present study was conducted in Macomb County, Michigan, a densely populated, industrialized suburban county of 482 square miles in the Detroit metropolitan area. The Macomb County Planning Commission estimates the 1982 population to be 688,110--down from 694,600 counted in the 1980 U. S. Census. According to 1980 census figures, 97.2 percent of the population were white, 1.3 percent were black, and 1.5 percent were other minorities. In 1980, the median family income was \$26,666; the number of households was 229,820 (i.e., an average of 3.02 persons per household); the median age was 29.1 years; and the median number of school years completed was 12.1.

Since no governmental agency in Macomb County compiles precise demographic information on the public school teacher population, the only information of such a nature available was that which could be inferred from demographic data compiled by the Michigan Department of

Education on a state-wide basis. According to one official from the Macomb Intermediate School District's Department of Communication and Management Training, the public school teacher population of Macomb County is highly representative of the population of public school teachers throughout Michigan. In Michigan, at the time of the study, the average teacher was 41 years of age and had 13 years of teaching experience; 62.8 percent of the teachers were female, 37.2 percent male; 56 percent had Master's degrees, while 41 percent had Bachelor's degrees, two percent had Specialist degrees or the equivalent, and only one percent had earned degrees at the doctoral level.

The accessible population from which the sample was selected was composed of approximately 4,500 teachers from the twenty-one school systems comprising the Macomb County Intermediate School District, which, at the time of the study, had a total student population of 132,796. Included in this total were full-time elementary, middle, junior, and senior high school teachers; special education personnel, administrators, and part-time help were excluded.

To obtain a .05 degree of accuracy, a sample size of 354 was chosen utilizing the following formula (Krejcie & Morgan, 1976):

$$s = \frac{X^2NP(1-P)}{d^2(N-1) + X^2P(1-P)}$$

where, s = required sample size

X^2 = the table value of chi-square for one degree of freedom at the desired confidence level (3.841)

N = the population size

P = the population proportion (assumed to be .50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (.05)

Estimating an 80 percent return rate, 450 questionnaires were mailed out. Ten percent of that number, or 45, was chosen as the quantity of questionnaires to distribute for the pilot study.

Since it was impossible to obtain a list of the names of all public school teachers in the population, the following procedure was used to identify the 495 teachers (450 for the actual administration and 45 for the pilot) who would receive the questionnaire:

1. A computer was used to randomly generate a series of two-digit numbers from 01 to 12 (i.e., 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, and 12). The first 450 numbers generated were placed in one group (for the main sample) and the following 45 numbers were placed in another group (for the pilot test).

2. Each two-digit number represented the grade level of the teacher to be chosen for a particular sampling unit.

3. Starting with the group of 450 numbers, the 01's were added to determine how many first grade teachers would be included in the main sample, the 02's were added to calculate the number of second grade teachers, etc. This procedure resulted in the following grade level distribution of the 450 teachers to whom the questionnaires were sent: 37 first grade; 28 second grade; 41 third grade; 28 fourth grade; 40 fifth grade; 31 sixth grade; 40 seventh grade; 56 eighth grade; 46 ninth grade; 38 tenth grade; 29 eleventh grade; and 36 twelfth grade.

4. The 225 public schools in Macomb County were listed vertically on a sheet in random order and numbered consecutively from 1 to 225.

5. A 12-by-225 matrix was set up, with the numbers across the top representing grade levels "1" through "12". For each school, a checkmark was placed in each square representing a grade level taught at that school; the remaining squares were left blank.

6. In the first column of the matrix (grade level "1"), the first checked square at or below the school, the number of which corresponded to a number between 1 and 225 selected from a random number table, was the starting point for a systematic selection of schools for that grade level.

7. Next, 150 (i.e., the number of checkmarks in column "1") was divided by 37 (i.e., the number of first grade teachers chosen in step #3), resulting in a value of 4 (rounding to the nearest whole number). Starting at the point described in step #6, every 4th checkmark in column "1" was circled, until a total of 37 had been chosen. The 37 first grade teachers to receive questionnaires would be selected from these schools; i.e., one from each school, with the selection made by the principal (see the third paragraph following).

8. For each of the remaining eleven grades, steps 6 and 7 were repeated (using a different random number for each starting point). Through this procedure, a list of 450 teachers was generated. These 450 teachers, described only by grade level and school, were selected to participate in the survey. Obviously, there were many cases in which the same school had more than one teacher in the sample.

Once the sample had been selected for the main study, the entire process was repeated to select the sample for the pilot study, using the 45 two-digit numbers mentioned in step one. Since the matrix

contained far more checkmarks for grades one through six (a total of 892) than for grades seven through twelve (226), it was possible to select the samples for the main study and the pilot study "without replacement" for the lower grades, while it was necessary to select "with replacement" for the upper grades.

Questionnaires were distributed through the principals at the schools selected. Each principal involved was mailed a package containing one or more sealed envelopes (containing survey materials) and a cover letter (see Appendix C) explaining the study and providing directions for distributing the enclosures to teachers at that school. The principal was asked to select the specific teacher(s) for the grade level(s) indicated, using whatever criteria he/she desired. Contained in each teacher envelope were the following items: a questionnaire; a cover letter (see Appendix E) explaining the study and establishing a ten day response deadline; a self-addressed, stamped envelope; and a dime, attached to a note stating that the money was provided for the purchase of a cup of coffee (or at least a portion of same) to drink while filling out the questionnaire.

A more direct method of sample selection and distribution of the questionnaire was impractical due to the impossibility of obtaining names and addresses of all the members of the population, as precluded by present policies.

Prior to the distribution of the questionnaires for the pilot study, a letter was sent to the superintendent of each of the twenty-one school districts involved, explaining the study, its purpose, how

it would be administered, and how the results would be used. The letter indicated that the findings from the survey would eventually be made available to them through the Macomb Intermediate School District.

Instrumentation

The decision as to whether to administer an instrument which had been employed in a previous study or to construct one specifically for the present study was not entirely a matter of choice. The most appropriate type of instrument for this research was an attitudinal questionnaire, but there are, unfortunately, some problems involved with those currently in existence. For example, as noted by Berryman and Berryman (1981):

The literature, including compilations of measurement reviews, offers no evidence that a viable scale of attitudes toward mainstreaming had been developed previously. In most instances, instruments used to measure attitudes related to mainstreaming have been designed for specific research activities without regard for formal validation procedures (Gickling and Theobald, 1975; Moore and Fine, 1978; Shotel, Iano, and McGettigan, 1972; Vacc and Kirst, 1977; Wechsler, Suarez, and McFadden, 1975). In other studies, instruments either contained items which did not appear to meet criteria for attitudinal statements (Harsymiw and Horne, 1976) or presented validation evidence which seemed insufficient (Jordan and Proctor, 1969). (p. 4)

In addition, as pointed out by Berryman, Neal, and Robinson (1980), many attitudinal surveys suffer from one or more of the following weaknesses: (a) outdated, (b) normative, rather than descriptive, (c) overly specific, as opposed to categorical, (d) internally inconsistent, and/or (e) too lengthy in combination to be practical. Furthermore, no instrument was located that had been designed to

examine either the specific research hypotheses currently under examination or the types of disabilities involved in the mainstreaming process at the present time; i.e., mild to moderate disorders, as opposed to severe or multiply handicapped.

It was decided, for the purposes of this study, to start with an existing survey instrument and broaden its scope to incorporate items of present interest not included in the original. Buletza's 1979 Attitude Toward Mainstreaming Questionnaire (ATMQ) was chosen since it had been designed to try to obviate the flaws described above. Furthermore, unlike previous surveys which had been focused on attitudes either toward certain specific categorical handicapping conditions or toward handicapped persons in general, the ATMQ represented an attempt to measure teacher attitudes toward the mainstreaming process itself.

The Buletza (ATMQ) Questionnaire

In the process of generating attitudinal statements for inclusion in his questionnaire, Buletza asked a panel of seventeen experts to rate each of thirteen categories of item generation on a three-point Likert-style scale according to the degree of relevance of each to mainstreaming. Six specific categories of teacher attitudes about mainstreaming were held to be most relevant, i.e., attitudes toward: (a) mainstreamed students, (b) individualization of instruction, (c) philosophy of mainstreaming, (d) the teacher's own competency, (e) organization of instruction, materials and methods, and (f) the relationship between general and special education.

Using these six categories, Buletza developed specific items for his questionnaire. To gauge the validity of these items, each member of a panel of eight experts rated each item on the basis of: (a) face validity, (b) content validity, (c) representativeness, (d) favorableness, (e) whether to include it in the instrument, and (f) importance. The final step in refining the instrument was a pilot study. By the time he completed his pilot study, Buletza had reduced 210 original items to the 40 ultimately included in his questionnaire.

Statistical analysis of data from the Buletza pilot study yielded an Alpha reliability coefficient of .90, based on a sample size of 46 subjects. Through factor analysis, it was verified that the ATMQ instrument did measure a single factor--attitude toward mainstreaming.

Attitude Regarding Mainstreaming Survey

Since the scope of the ATMQ was not broad enough to cover all areas of interest in the present study, it served only as the core around which a broader Attitude Regarding Mainstreaming Survey (ARMS) instrument (see appendix B) was built. The forty questions of the original ATMQ were incorporated without change into the ARMS as items 9-48, with the following sections being added:

1. Seven demographic questions related directly to the eight hypotheses under investigation, i.e., the hypotheses regarding age, sex, years taught, grade level taught, education, special education courses taken, number of years teaching in nonmainstreamed classrooms, and number of years of teaching in mainstreamed classrooms.

2. One new section of eight questions (items 1-8) regarding the respondent's perception of help available to cope with mainstreaming.

3. One new section of twelve questions (item number 49) assessing teacher attitudes regarding specific handicapping conditions (not to be tested statistically, but simply described).

4. Two additional questions (items numbered 50 and 51) which asked respondents to rank certain incentives (team-teaching, smaller class size, increased in-service training, increased preparation time, and "other") which could be used by school systems to enhance teacher acceptance of mainstreaming.

Items unique to the ARMS were developed and tested through a series of stages, including: (a) item identification, (b) item validation, (c) instrument design, (d) pilot testing, and (e) analysis.

A panel of five experts was asked to assist in the first two of these stages. To ensure that this panel had the proper perspective and could anticipate reactions of the respondents to the instrument, only professionals familiar with the role of the regular classroom teacher in the mainstreaming process were asked to participate.

Stage one--item identification. The first step in expanding the ATMQ entailed the identification of test items relevant to the three categories not examined by the original instrument, namely: (a) type of pupil-handicapping condition, (b) the teacher's perception of potential help available, such as professional staff and/or support services, and (c) the opinions of teachers on possible incentives which, if offered to them, would improve their attitudes toward mainstreaming. A review of literature, personal observation, and

discussions with special and regular teachers and with administrators led to the development of specific additional questionnaire items. The panel of experts was asked to review each item with regard to wording, simplicity, directness, clarity, readability, and appropriateness. Based on suggestions of panel members, all eleven items were retained in the instrument; only two of the eleven needed to be modified.

Stage two--item validation. The five members of the panel were then asked to rate each item on: (a) validity (does it measure what it is supposed to measure?), (b) generalizability (can inferences be made about the general population based on the responses of those persons included in the sample?), and (c) importance of the item to the study. To be retained in the instrument, each item had to be acceptable to at least 80 percent of the panel on each of the first two criteria, as well as receiving a mean score of 2.5 or better on criterion number three. Each of the eleven items was acceptable to 100 percent of the panel. All items received a mean score of 3.0 (perfect), with the exception of two, which each scored 2.75.

Stage three--instrument design. Several types of attitudinal rating scales were considered, including summated, cumulative and equal-appearing interval scales. Since most of the items included in the ARMS were to be taken directly from the ATMQ, for which a Likert scale had been used, that system was chosen for responses to those statements requiring other than a "Yes/No" answer or a rank order.

Stage four--pilot testing. Once the questionnaire was developed and printed, a pilot test was conducted. The instrument was mailed

to the 45 classroom teachers randomly selected in the procedure outlined earlier (see "Population and Sample"). The purposes of this test were to: (a) determine if there would be any logistical difficulties in administering the actual survey, and (b) provide data for reliability testing of the total instrument.

Of 45 questionnaires sent out, a total of 28 (62 percent) were returned by respondents. No logistical problems were encountered. Thus, no modification of distribution procedures for the main study was required.

Stage five--statistical analysis of instrument. The validity of the forty items taken directly from the ATMQ had already been established by Buletza. Thus, only the reliability of these items had to be established for the population currently under study. Whereas the reliability coefficient from Buletza's pilot study was .90 (see page 36), the present pilot study yielded an alpha reliability coefficient of .96 when tested using the following "split-half" form of the coefficient (Cronbach, 1970):

$$\alpha_2 = 2 \left(1 - \frac{\text{variance of odds} + \text{variance of evens}}{\text{variance of total}} \right)$$

A respondent's attitude toward mainstreaming was measured by scoring 1 to 5 points on each of the forty questions taken from the ATMQ (items 9-48). A score of "1" was assigned for a strongly negative response, "3" for neutral, "5" for strongly positive, etc. Thus, the range of possible scores extended from 40 for the most negative to 200 for the most positive.

As indicated in Tables 1 and 2, the distribution of scores was

remarkably close to a normal distribution, particularly in its lack of skewness (note the mean, median and the mode) and the percentage of scores falling within ± 1 and ± 2 standard deviations of the mean.

Table 1
Distribution of Test Scores: Pilot Study

Number of Scores	28
Range of Scores	61 - 161
Mean	117.82
Median	117
Mode	117
Standard Deviation (s)	23.84
Percent of scores within ± 1 s of the Mean	64.3%
Percent of scores within ± 2 s of the Mean	96.4%

Table 2
Frequency Distribution: Pilot Study

Interval of Scores	Frequency	Cumulative Frequency	Percent	Cumulative Percent
150-169	3	28	10.7%	100.0%
130-149	5	25	17.9%	89.3%
110-129	12	20	42.8%	71.4%
90-109	4	8	14.3%	28.6%
70-89	3	4	10.7%	14.3%
50-69	1	1	3.6%	3.6%

Based on the results of the distribution analysis and the high alpha reliability coefficient, it was determined that the ARMS was an acceptable instrument for the intended purpose. Thus, it could be used for the main study without modification.

Table 3

Mean and Standard Deviation of Items: Pilot Study

Item No.	Mean	Std. Dev.	Item No.	Mean	Std. Dev.
9	2.68	1.04	29	2.04	1.05
10	3.04	.98	30	2.36	1.08
11	3.21	.90	31	2.89	1.14
12	3.14	1.13	32	3.00	1.04
13	3.00	1.13	33	2.93	.88
14	2.68	1.26	34	3.21	.98
15	2.86	1.09	35	3.61	.94
16	2.68	1.42	36	3.14	1.09
17	3.21	1.01	37	2.50	.94
18	3.21	1.11	38	3.50	.94
19	3.21	.98	39	2.61	1.11
20	3.71	1.06	40	3.39	.98
21	2.25	.99	41	3.14	1.03
22	3.29	1.28	42	1.93	.92
23	3.29	1.10	43	2.21	1.08
24	2.89	1.08	44	3.46	.91
25	3.14	1.03	45	2.29	.92
26	3.39	.98	46	3.32	.89
27	3.00	.89	47	2.86	1.03
28	2.86	1.03	48	2.68	.39

Note: The six most positive items: 20, 35, 38, 44, 26, 40.

The six most negative items: 42, 29, 43, 21, 45, 30.

In Table 3, the mean score and standard deviation for each of the items numbered 9 through 48 are listed. As previously explained, a score of "3" represents a neutral response. For the pilot study, there were 19 items scoring above 3.0, three items scoring exactly 3.0, and 18 items with mean scores below 3.0. Mean scores ranged from 1.93 for item number 42 (which stated that mainstreamed pupils require more support and reinforcement than the general education teacher has time to provide) to 3.71 for item number 20 (stating that mainstreaming is a multi-faceted problem which will be resolved by the joint efforts of general and special education teachers).

Summary

In this chapter, the design and methodology of the study were presented. Included were a restatement of the areas of interest, the introduction of a research question, a description of the population studied and the method used to select the sample which represented that population, an explanation of how the test instrument was developed, and a discussion of the pilot study which was conducted to test that instrument. The chapter concluded with a presentation of the results of analyses performed on the data obtained from the administration of the pilot study. Since results from the pilot study were satisfactory, the investigator proceeded to the main study using this instrument. Details of the main study are provided in Chapter IV.

CHAPTER IV

FINDINGS

In this chapter three areas of the study are examined: (a) the characteristics of the respondents from whom completed questionnaires were received; (b) the findings from the statistical analyses of the data collected to test the eight research hypotheses and to answer the one research question dealing with the relationship between regular classroom teachers' attitudes toward mainstreaming and their perception of potential help available; and (c) the results of the survey of opinions on the types of handicapping conditions respondents would be willing to accept into their classrooms and on the effectiveness of certain incentives as catalysts enhancing acceptance of mainstreaming.

Description of Respondents

The population from which the sample was chosen was described in Chapter III (see pages 29 and 30). Of the 450 questionnaires distributed, 356 (i.e., 79.1 percent) were returned. Of these, five questionnaires were unusable and fifteen were returned unanswered with notes from administrators that they had not been distributed either because the school had been closed or because the school had no mainstreaming program; thus, 336 (i.e., 74.7 percent) were usable.

From the original mailing, only 215 (207 usable) questionnaires had been returned. Since this represented a return rate of only 48

percent, far short of the 80 percent desired, a second distribution was made. New packages were mailed to those schools from which questionnaires had not yet been received. See Appendix D for cover letter. This follow-up mailing was undertaken for two reasons, i.e., (a) to increase the return rate in an effort to reach the 80 percent goal, and (b) to reduce any bias which might have been caused by the non-response of the unaccounted-for 52 percent.

Of the respondents, 59.8 percent were female, 40.2 percent male, as compared to 62.8 percent and 37.2 percent, respectively, for the population. Just over 57 percent taught grades seven through twelve; the remaining 43 percent taught grades one through six. The greatest number (64.9 percent) held Master's degrees, followed in order by 24.1 percent with Bachelor's degrees, 10.1 percent with Specialist's degrees or the equivalent, and 0.9 percent with Doctor's degrees. By comparison, 56 percent of the population had Master's degrees, 41 percent Bachelor's, two percent Specialist's and one percent Doctor's. Those respondents indicating that they had never taken a special education course comprised 67.3 percent of the total, while 16.7 percent had taken one to two courses, 9.8 percent had completed three to five courses, 1.8 percent six to ten courses, and 1.2 percent had taken over ten special education courses. Slightly more than three percent did not indicate how many courses they had taken.

The average age of those responding to the questionnaire was 41.1 years, compared to a population average of 41 years. The mean number of years of total teaching experience was 16.8 years, nearly four years above the 13 years of the population. For a complete

comparison of the demographics of the sample with those of the population, see Table 4. Profiles and frequency polygons for age and teaching experience of respondents are provided, respectively, in Tables 5 and 6 and Figures 1 and 2.

Table 4
Comparison of Sample and Population

Characteristic	Sample	Population
<u>Average Age</u>		
Years	41.1	41
<u>Average Teaching Experience</u>		
Years	16.8	13
<u>Sex</u>		
Female	59.8%	63%
Male	40.2%	37%
<u>Highest Level of Education</u>		
Bachelor's degree	24.1%	41%
Master's degree	64.9%	56%
Specialist's or equivalent	10.1%	2%
Doctor's degree	0.9%	1%
<u>Grade Level Taught^a</u>		
Grades 1-6	57.4%	
Grades 7-12	42.6%	
Elementary		47%
Middle/Junior High		24%
Senior High		29%

^aAn exact comparison is impossible, because of overlapping of grade levels by many respondents, and the lack of consistent definitions of specific grade levels by districts throughout the County.

Table 5

Profile of Respondents: Age and Teaching Experience

Characteristic	n	Mean	Median	Mode	Range	.S.D.
Age	328 ^a	41.1 ^b	39	39	25-68	8.1
Total Years Teaching	336	16.8 ^c	16	16	3-39	6.1

^aNot all respondents indicated age.

^bCompared to a population mean age of 41 years.

^cCompared to a population mean of 13 years teaching experience.

Table 6

Profile of Respondents: Mainstreamed and Non-Mainstreamed Experience

Total Number of Years	Total Amount of Teaching Experience ^a	Experience Teaching Mainstreamed Classes ^b	Experience Teaching <u>Solely</u> Non-Handicapped ^b
No experience	0.0%	49.4%	17.7%
1 - 10 years	13.4%	29.7%	27.4%
11 - 20 years	61.6%	14.5%	40.7%
21 - 30 years	23.2%	6.4%	12.9%
over 30 years	<u>1.8%</u>	<u>0.0%</u>	<u>1.3%</u>
Total	100.0%	100.0%	100.0%

^aPercent of all respondents.

^bPercent of those giving this information (i.e., 310 respondents).

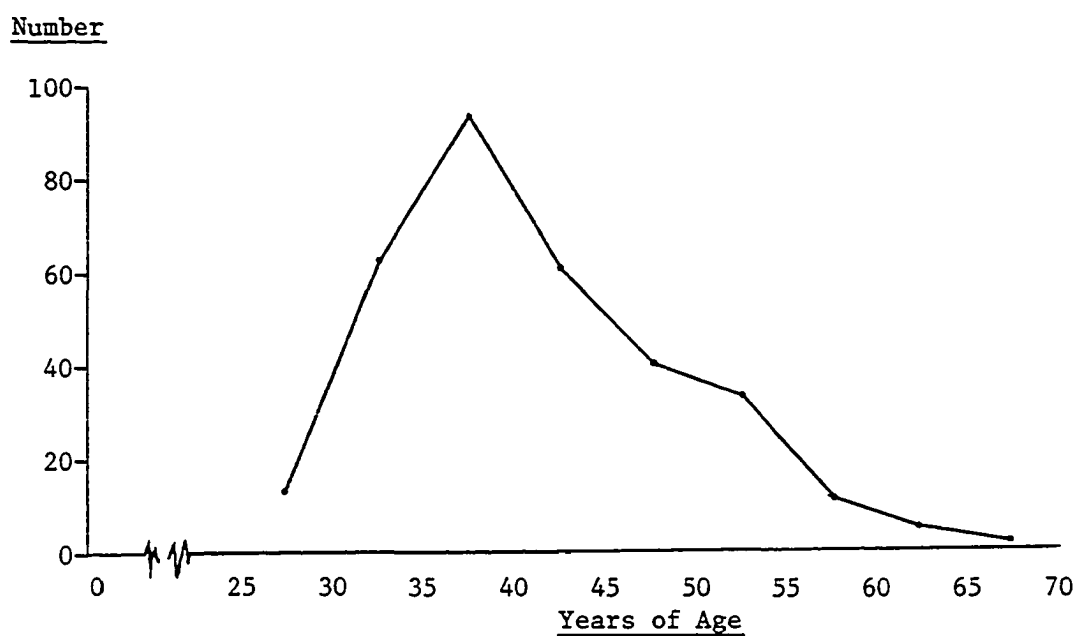


Figure 1. Frequency Polygon for Age of Respondents

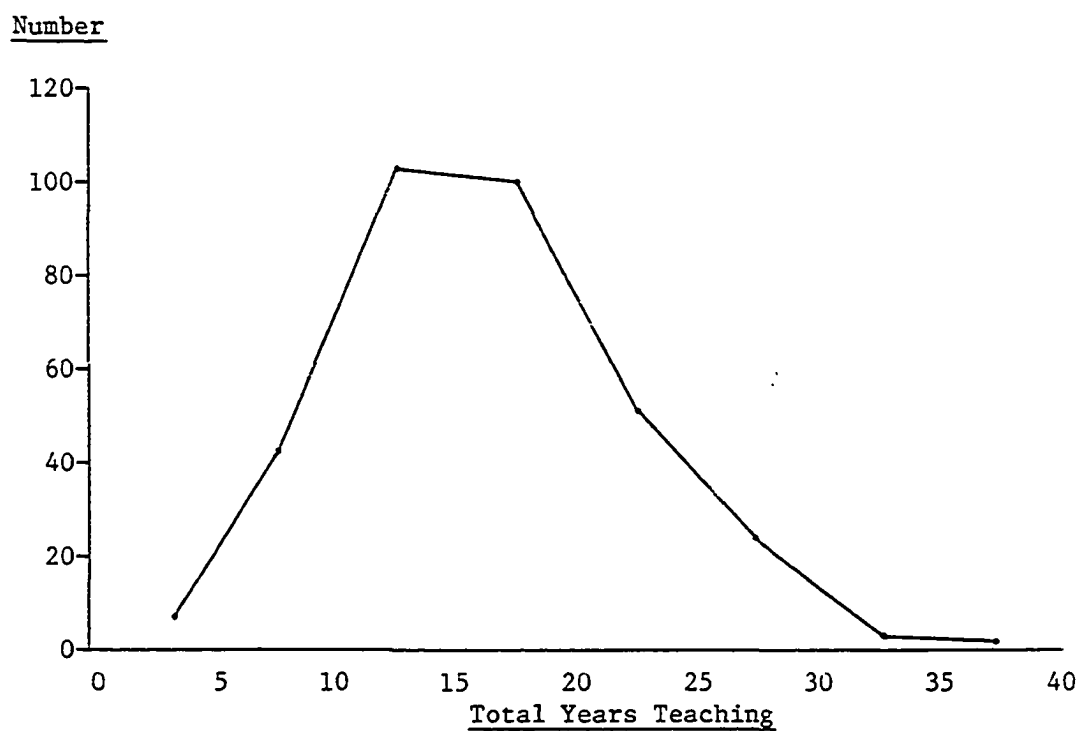


Figure 2. Frequency Polygon for Total Years of Teaching Experience

Treatment of the Data

Buletza rated each of his forty ATMQ items as to whether agreement with that statement constituted a positive or negative response. Using Buletza's criteria, responses to items numbered 9 through 48 of the ARMS were each scored one through five points, with five being the most positive. Thus, each respondent scored between 40 and 200 total points. For analyses performed on the data from the ARMS, this total score was used as a measurement of the degree of positiveness/negativeness of the respondent's attitude about mainstreaming.

A total score of 120 points was considered to indicate a neutral attitude regarding mainstreaming. The mean for all respondents was a fraction of one point above this score. The distribution of scores approximated a normal curve, with the mean (120.2), the median (117), and the mode (121) clustering very close together, and with 65.2 percent of the scores falling within one standard deviation of the mean (as compared to 68.3 percent for a normal curve) and 95.8 percent within two standard deviations of the mean (compared to 95.4 percent for a normal curve). More specific information is provided in the following four tables. Tables 7 and 8 contain details of the distribution of the scores, and Table 9 lists the mean and standard deviation of the responses to each of the items numbered 9 through 48. By comparing the figures in these tables, respectively, to those in Tables 1, 2 and 3 from Chapter III, it is clear that the pilot sample was quite representative of the main sample. In Table 10, the items from the main study are ranked according to mean score.

Table 7
Distribution of Test Scores: Main Study

Number of Scores	336
Range of Scores	59 - 183
Mean	120.2
Median	117
Mode	121
Standard Deviation (s)	24.9
Percent of scores within $\pm 1s$ of the Mean	65.2%
Percent of scores within $\pm 2s$ of the Mean	95.8%

Table 8
Frequency Distribution: Main Study

Interval of Scores	Frequency	Cumulative Frequency	Percent	Cumulative Percent
170-189	7	336	2.1%	100.0%
150-169	37	329	11.0%	97.9%
130-149	74	292	22.0%	86.9%
110-129	110	218	32.8%	64.9%
90-109	71	108	21.1%	32.1%
70-89	31	37	9.2%	11.0%
50-69	6	6	1.8%	1.8%

Table 9
Mean and Standard Deviation of Items: Main Study

Item No.	Mean	Std. Dev.	Item No.	Mean	Std. Dev.
9	2.61	1.18	29	1.99	1.06
10	3.29	1.09	30	2.40	1.10
11	3.31	1.06	31	3.05	1.22
12	2.90	1.22	32	3.11	1.12
13	3.18	1.14	33	3.04	1.06
14	2.52	1.28	34	3.09	1.10
15	2.75	1.14	35	3.67	.94
16	2.90	1.37	36	3.29	1.14
17	3.11	1.23	37	2.78	1.15
18	3.13	1.16	38	3.80	.89
19	3.18	1.21	39	2.58	1.18
20	3.49	1.04	40	3.41	1.03
21	2.39	1.22	41	3.56	1.01
22	3.49	1.19	42	2.16	1.10
23	3.40	1.02	43	2.42	1.16
24	2.87	1.14	44	3.55	.96
25	3.31	1.10	45	2.35	1.06
26	3.31	1.07	46	3.37	.96
27	3.06	1.03	47	2.74	1.17
28	2.81	1.26	48	2.79	1.10

Note: In Table 10 these items are ranked by mean score.

Table 10
Ranking of Test Items by Mean

Rank	Item	Mean	Rank	Item	Mean
1	38	3.80	21	27	3.06
2	35	3.67	22	31	3.05
3	41	3.56	23	33	3.04
4	44	3.55	24	12	2.90
5	22	3.49	25	16	2.90
6	20	3.49	26	24	2.87
7	40	3.41	27	28	2.81
8	23	3.40	28	48	2.79
9	46	3.37	29	37	2.78
10	26	3.31	30	15	2.75
11	25	3.31	31	47	2.74
12	11	3.31	32	9	2.61
13	36	3.29	33	39	2.58
14	10	3.29	34	14	2.52
15	19	3.18	35	43	2.42
16	13	3.18	36	30	2.40
17	18	3.13	37	21	2.39
18	32	3.11	38	45	2.35
19	17	3.11	39	42	2.16
20	34	3.09	40	29	1.99

Testing of the Research Hypotheses

Almost 46 percent of the respondents indicated that they had never been involved in mainstreaming. These individuals were asked to respond to all questions as they perceived their situations would be if they were involved in such programs. Since it was distinctly possible that results could in some way be biased by the responses of these individuals, it was decided that each null hypothesis would be tested twice--once with data from all respondents and a second time with a sub-sample consisting only of data obtained from respondents answering the questions based on actual mainstreaming experience.

The one exception to this testing procedure was hypothesis number seven, which dealt with the relationship between attitude about mainstreaming and the number of years the teacher had taught solely non-handicapped pupils. For that hypothesis, two tests were run--the first with all the data and the second using data obtained from a sub-sample consisting only of those respondents who indicated that they had taught non-handicapped pupils. Here, the aim was to eliminate any bias introduced by teachers who had only taught mainstreamed classes.

In only one case--that of hypothesis seven--did results from the analyses of data from all respondents vary significantly from results of analyses of sub-sample data. As shown in Table 17, even in this case, while the correlation coefficient obtained for the sub-sample was significant, it was just slightly higher than the critical value established.

In a further effort to control for bias, the scores of respondents with mainstreaming experience were compared with the scores of those who indicated that they had not been involved in mainstreaming. The correlation analysis performed yielded a point biserial correlation coefficient of .102, which was not significant.

Hypothesis One. The first analysis performed was a correlation analysis undertaken to determine if there is a relationship between a teacher's attitude toward mainstreaming handicapped pupils into his/her classroom and the age of the teacher. As indicated in Table 11, this test yielded a Pearson Product Moment Correlation Coefficient (Pearson r) of $-.186$, which was significant. Analyzing just the data from respondents with mainstreaming experience produced a correlation coefficient of $-.277$, which was likewise significant. In each case, the null hypothesis was rejected at the .05 level of significance. Based on these results, it can be inferred that younger teachers are more positive about mainstreaming than are their older colleagues.

Table 11
Correlation Analysis for Age
Pearson Product Moment Correlation Coefficient

Data Tested	n	df	<u>r</u>	CV	p	Results
Entire sample	328	326	$-.186$	.109	$p < .05$	H_0 Rejected
Sub-sample ^a	155	153	$-.277$	.157	$p < .05$	H_0 Rejected

^aThe sub-sample excluded those without mainstreaming experience.

Hypothesis Two. The second correlation analysis undertaken was performed to determine if a relationship exists between a teacher's sex and his/her attitude toward mainstreaming handicapped pupils into the classroom. From Table 12 it may be seen that this test yielded a Point Biserial Correlation Coefficient (point biserial r) of $-.022$ for all data and of $.019$ using only those data from respondents with mainstreaming experience. In neither case was there a significant correlation. Thus, the null hypothesis could not be rejected at the $.05$ level of significance. Based on these results, it would appear that there is no difference between male and female teachers with regard to their attitudes about mainstreaming.

Table 12
Correlation Analysis for Sex
Point Biserial Correlation Coefficient

Data Tested	n	df	r	CV	p	Results
Entire sample	336 ^a	334	$-.022$	.108	$p > .05$	H_0 Not Rejected
Sub-sample ^b	157 ^c	155	$.019$	.156	$p > .05$	H_0 Not Rejected

^aThis includes 135 males and 201 females.

^bThe sub-sample excluded those without mainstreaming experience.

^cThis includes 62 males; 95 females

Hypothesis Three. The third set of correlation analyses was performed to determine if there is a relationship between a teacher's attitude toward mainstreaming handicapped pupils into his/her

classroom and the grade level taught. Half of all respondents taught more than one grade (a quarter taught three or more). In order to avoid excluding those respondents (perhaps 15 to 20 percent of the total) teaching grades at more than one level (i.e., elementary, middle, junior high, and senior high), the only groupings possible were those for grades seven-through-twelve and grades one-through-six. As indicated in Table 13, correlation analysis of responses from these two groups resulted in a point biserial correlation of $-.012$ for all data, and an r of $.035$ for respondents with mainstreaming experience. In neither case was there a significant correlation. The null hypothesis could not be rejected at the $.05$ level of significance. Based on this result, it would appear that there is no relationship between grade level taught and attitude about mainstreaming.

Table 13
Correlation Analysis for Grade Level Taught
Point Biserial Correlation Coefficient

Data Tested	n	df	r	CV	p	Results
Entire sample	336 ^a	334	$-.012$	.108	$p > .05$	H_0 Not Rejected
Sub-sample ^b	157 ^c	155	$.035$	.156	$p > .05$	H_0 Not Rejected

^aIncluding 143 teaching grades 1-6 and 193 teaching grades 7-12.

^bThe sub-sample excluded those without mainstreaming experience.

^cIncluding 53 teaching grades 1-6 and 104 teaching grades 7-12.

Hypothesis Four. The fourth series of tests performed were correlation analyses undertaken to determine if there is a relationship between a teacher's attitude toward mainstreaming handicapped pupils into his/her classroom and the teacher's level of education. Unlike the previous three hypotheses which were each subjected to two correlation analyses (first with all data and then with only data from respondents with mainstreaming experience), this fourth null hypothesis was tested a total of six times (see Table 14). For the first three of these tests, using all the data, point biserial correlation coefficients were calculated, comparing the following pairs of scores: (a) those of respondents with Bachelor's degrees with those of respondents possessing Master's degrees, which yielded an r of .041 (not significant); (b) those of holders of Specialist's degrees with those of the Master's, which produced an r of $-.023$ (not significant); and (c) scores of those holding Specialist's degrees with those of the Bachelor's, which generated an r of $-.074$ (not significant). In each case, the null hypothesis could not be rejected at the .05 level. Excluded from analysis were scores of the three respondents indicating that they possessed Doctor's degrees.

When point biserial correlation analyses were performed on data only from respondents with mainstreaming experience, the following coefficients resulted: (a) Bachelor's degree holders vs. Master's, $r = .002$ (not significant); (b) Specialists vs. Masters, $r = -.009$ (not significant); and (c) Specialists vs. Bachelors, $r = -.012$ (not significant). Again, in each case, the null hypothesis could not be rejected at the .05 level.

Based on these results, it would appear that there is no relationship between a teacher's attitude toward mainstreaming handicapped pupils into his/her classroom and the teacher's level of education.

Table 14
Correlation Analysis for Educational Level^a
Point Biserial Correlation Coefficient

Data Tested	n	df	<u>r</u>	CV	p	Results
<u>Bachelor's vs. Master's</u>						
Entire sample ^b	299	297	.041	.114	p>.05	H ₀ Not Rejected
Sub-sample ^c	134	132	.002	.170	p>.05	H ₀ Not Rejected
<u>Specialist's vs. Master's</u>						
Entire sample ^b	252	250	-.023	.124	p>.05	H ₀ Not Rejected
Sub-sample ^c	125	123	-.009	.175	p>.05	H ₀ Not Rejected
<u>Specialist's vs. Bachelor's</u>						
Entire sample ^b	115	113	-.074	.183	p>.05	H ₀ Not Rejected
Sub-sample ^c	53	51	-.012	.270	p>.05	H ₀ Not Rejected

^aAnalyses excluded data from three respondents with Doctor's degrees, whose scores were 100, 153, and 167 points, respectively.

^bOf those in the entire sample, 81 had Bachelor's degrees, 218 had Master's degrees, and 34 had Specialist's degrees.

^cIn the sub-sample of those with mainstreaming experience, 31 had Bachelor's degrees, 103 had Master's degrees, and 22 had Specialist's degrees.

Hypothesis Five. The fifth correlation analysis performed was undertaken to determine if a relationship exists between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of special education courses taken by the teacher. As in all previous analyses, two sets of data were tested, i.e., data from all respondents and data only from those respondents with mainstreaming experience. Two types of analyses were undertaken with this hypothesis: the first to determine if there is a relationship between a respondent's attitude about mainstreaming and the fact that he/she had or had not taken special education courses, and the second case (testing only data from those respondents who had taken special education courses) to determine if there is a relationship between attitude and the number of special education courses taken. Results of these analyses are shown in Table 15.

An analysis of the scores of those who had taken at least one special education course and the scores of those without such courses yielded a point biserial correlation coefficient of .091, which was not significant. Performing the same analysis using only data from respondents with mainstreaming experience produced a point biserial r of .087, likewise not significant. In each case, the null hypothesis could not be rejected at the .05 level.

To examine the relationship between attitude about mainstreaming and the number of special education courses taken, the scores of those who had taken special education courses were analyzed, yielding a Pearson r of .135, which was not significant. A similar analysis of data from respondents with mainstreaming experience yielded a

Pearson r of .122, likewise not significant. Again, the null hypothesis could not be rejected at the .05 level.

Based on the results of these analyses, there does not appear to be a relationship between a teacher's attitude about mainstreaming and (a) the fact that he/she has or has not taken any special education courses, nor (b) the number of special education courses taken.

Table 15
Correlation Analysis for Special Education Courses Taken

Data Tested	n	df	r^a	CV	p	Results
<u>Those with Courses vs. Those without Courses:</u>						
Entire sample ^b	325	323	.091	.110	$p > .05$	H_0 Not Rejected
Sub-sample ^c	155	157	.087	.157	$p > .05$	H_0 Not Rejected
<u>Number of Courses Taken:</u>						
Entire sample ^d	98	96	.135	.199	$p > .05$	H_0 Not Rejected
Sub-sample ^e	55	53	.122	.265	$p > .05$	H_0 Not Rejected

^aThe first two are point biserial r ; the latter two are Pearson r .

^bIn the entire sample, 99 had taken special education courses, 226 had taken none. Eleven did not provide this information.

^cOf those with mainstreaming experience, 56 had taken special education courses, 99 had taken none.

^dIncludes all respondents who had taken special education courses.

^eIncludes only those with mainstreaming experience who had taken special education courses.

Hypothesis Six. The sixth correlation analysis performed was undertaken to determine if a relationship exists between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of years the teacher has taught. As indicated in Table 16, analysis yielded a Pearson r of $-.221$ for data from all respondents and $-.249$ for data from respondents with mainstreaming experience, both of which were significant. In each case, the null hypothesis was rejected at the .05 level. Accordingly, it can be inferred that for the population under study, the longer the teacher has taught, the more negative his/her attitude about mainstreaming is likely to be.

Table 16

Correlation Analysis for Total Years of Teaching Experience

Pearson Product Moment Correlation Coefficient

Data Tested	n	df	r	CV	p	Results
Entire sample	336	334	$-.221$	.108	$p < .05$	H_0 Rejected
Sub-sample ^a	157	155	$-.249$	.156	$p < .05$	H_0 Rejected

^aThe sub-sample excluded those without mainstreaming experience.

Hypothesis Seven. The seventh correlation analysis performed was undertaken to determine if there is a relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of years the teacher has taught mainstreamed classes. In this one case, contradictory results were obtained from

the two analyses. From Table 17, the Pearson r obtained by analyzing data from all respondents was $-.079$, which was not significant; while for data only from respondents with mainstreaming experience, r was equal to $-.180$, which was significant. The null hypothesis could not be rejected at the .05 level for all data, but it could be rejected at that level for data only from the sub-sample.

Table 17
Correlation Analysis for Years Teaching
Mainstreamed Classes
Pearson Product Moment Correlation Coefficient

Data Tested	n	df	r	CV	p	Results
Entire sample ^a	336	334	$-.079$	.112	$p > .05$	H_0 Not Rejected
Sub-sample ^b	157	155	$-.180$	.156	$p < .05$	H_0 Rejected

^aTwenty-six respondents did not provide this information.

^bThe sub-sample excluded those without mainstreaming experience.

While results of the two analyses are contradictory, it could be argued that, since the second analysis dealt only with data from the respondents who had actually taught mainstreamed classes, the significant correlation coefficient of $-.180$ obtained from that data was a truer indicator of the relationship under study. Therefore, it can be inferred that the more years a teacher has taught mainstreamed classes, the more negative his/her attitude about mainstreaming is likely to be.

Hypothesis Eight. The final correlation analysis undertaken to test a research hypothesis was that performed to determine if there is a relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of years the teacher has taught solely non-handicapped pupils. As indicated in Table 18, analysis yielded a Pearson r of $-.142$ for all data and $-.187$ for data from the sub-sample (those respondents who had taught non-mainstreamed classes), both of which were significant. In each case, the null hypothesis was rejected at the .05 level.

Table 18

Correlation Analysis for Years Teaching
Solely Non-handicapped Pupils

Pearson Product Moment Correlation Coefficient

Data Tested	n	df	r	CV	p	Results
Entire sample ^a	256	254	$-.094$	.123	$p < .05$	H_0 Rejected
Sub-sample ^b	214	212	$-.166$	.134	$p < .05$	H_0 Rejected

^aTwenty-six respondents did not provide this information.

^bThe sub-sample excluded those without nonmainstreamed experience.

The Research Question. To examine the research question posed by the investigator on page 28, a final analysis was undertaken to determine if there is a relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the teacher's perception of potential help available in coping with these

pupils. The correlation analysis from Table 19 revealed a strong positive relationship, yielding a Pearson r of .604 for data from all respondents, and a similar r of .624 for data from respondents with mainstreaming experience--in each case a relationship significant at the .05 level.

A further indication of the strength of this relationship is the coefficient of determination (r^2), indicating that between 36 and 39 percent of the variance in teacher attitudes about mainstreaming can be associated with variance in the perception of potential help available.

Table 19
Correlation Analysis for Perceived Help Available
Pearson Product Moment Correlation Coefficient

Data Tested	n	df	r	CV	p	Results
Entire sample	336	334	.604	.108	$p < .05$	H_0 Rejected
Sub-sample ^a	157	155	.624	.156	$p < .05$	H_0 Rejected

^aThe sub-sample excluded those without mainstreaming experience.

Results of Opinion Surveys

As stated at the beginning of Chapter III, in addition to testing the research hypotheses and answering the research question, one of the aims of the present study was to survey the attitudes of the respondents with regard to two areas of concern, i.e., (a) types of

handicapping conditions they would be most and least willing to accept into their classrooms, and (b) effectiveness of various incentives which might be offered to them to enhance their acceptance of mainstreaming. The results of these surveys are presented below.

Handicapping condition. Respondents were asked to indicate whether or not they would accept each of twelve types of handicapped pupils by circling "YES" or "NO." For each condition, a percentage was calculated by dividing the number of YES's by the total number of respondents. As shown in Table 20, the greatest number of respondents expressed a willingness to accept speech impaired and hearing impaired pupils into their classrooms. On the other hand, the least acceptable pupils were those classified as emotionally impaired, blind, or deaf.

Table 20

Willingness of Respondents to Accept
Various Handicapping Conditions into Their Classrooms

Handicapping Condition	Respondents Willing to Accept	
	Number	% of Total
Speech impaired	311	92.6%
Hearing impaired	302	89.9%
Physically disabled	281	83.6%
Learning disabled	272	81.0%
Epileptic	265	78.9%
Visually impaired	260	77.4%
Physically deformed	254	75.6%
Cerebral palsied	198	58.9%
Educably mentally retarded	161	47.9%
Blind	129	38.4%
Emotionally impaired	118	35.1%
Deaf	116	34.5%

Incentives. Respondents were asked to choose, from a list of five options, any or all they thought would truly encourage them to more readily accept mainstreaming. They were also given a sixth option entitled "other" and asked to specify. They were then asked to rank their choices in order of preference.

Responses were scored on the basis of three criteria: (a) the total number of times an option was selected, regardless of its rank; (b) the total number of times an option was selected as the respondent's first choice; and (c) the total "ranking points" earned, i.e., six points for a first choice, five points for second choice, four points for third, etc.

As seen in Tables 21 through 24, the most desirable incentive by far was reduced class size, ranking highest on each of the three criteria. Increased preparation time (fewer teaching hours) was second on criteria (a) and (c), while team teaching with a special educator on a full-time basis was second on criterion (b). Of the options listed, a stipend (annual bonus added to regular salary) was the least preferred on each of the three criteria.

Table 21

Incentives: Criterion A

Total Number of Times Selected, Regardless of Ranking

Option	Respondents Selecting	Percent of Respondents
Reduced class size	272	80.9%
Increased preparation time (fewer teaching hours)	222	66.1%
Increased in-service training	179	53.3%
Team-teaching with special educator on full-time basis	169	50.3%
Stipend (annual bonus added to regular salary)	134	39.9%
Increased support services from special education personnel ^a	21	6.2%
Other ^b	46	13.7%

^aSpecified by 21 respondents who marked "other".

^bIncluding (a) special materials and/or equipment, (b) reduced number of mainstreamed pupils, (c) ability to have handicapped pupil removed if unable to cope, (d) aides, (e) exclusion of emotionally impaired pupils, and (f) different grading system.

Table 22

Incentives: Criterion B

Total Number of Times Selected as First Choice

Option	Times Selected as 1st Choice	Percent of 1st Choices
Reduced class size	158	49.4%
Team-teaching with special educator	65	20.3%
Increased preparation time	42	13.1%
Increased in-service training	27	8.5%
Stipend	10	3.1%
Other	18	5.6%

Table 23

Incentives: Criterion C

Total "Ranking Points" Earned

Option	Total Points	Overall Ranking
Reduced class size	1,526	1st
Increased preparation time	1,039	2nd
Team-teaching with special educator	804	3rd
Increased in-service training	728	4th
Stipend	455	5th
Other	216	6th

Table 24
Incentives: Ranking on Each Criterion

Rank	Criterion A	Criterion B	Criterion C
1st	Reduced class size	Reduced class size	Reduced class size
2nd	Increased prep time	Increased prep time	Team teaching
3rd	In-service training	Team teaching	Increased prep time
4th	Team teaching	In-service training	In-service training
5th	Stipend	Stipend	Other
6th	Other	Other	Stipend

Perceptions of Help Available

As seen in Table 25, two of the first eight items on the ARMS, i.e., those numbered 1 and 4, received fairly positive responses, revealing a general belief by respondents that qualified professional special education personnel (i.e., psychologists, social workers, teacher consultants, etc.) were available to assist them in teaching handicapped children, and that these personnel worked cooperatively with them.

Neutral responses were recorded on items numbered 3 and 8, which dealt, respectively, with the availability of adequate equipment and materials needed to teach handicapped pupils and with the general assessment by respondents of the helpfulness to them of special education personnel.

Table 25

Respondent Perceptions of Potential Help Available as Shown
by Mean Scores for Items Numbered 1 Through 8 on the ARMS

Category of Respondent Perceptions	Mean
Availability of:	
Qualified professional special education personnel (Item #1)	3.73
Aides, secretaries and other support personnel (Item #2)	2.39
Adequate materials and equipment (Item #3)	3.09
Attributes of special education personnel with regard to:	
Cooperativeness (Item #4)	3.45
General helpfulness (Item #8)	2.82
Assistance from special education personnel in:	
Individualizing instruction (Item #5)	2.46
Modifying unwanted behavior (Item #6)	2.54
Adapting curricular materials (Item #7)	2.46

Mostly negative responses were provided to items numbered 5, 6, and 7, indicating that special education personnel had not done a very credible job of providing specific types of assistance to the respondents in such areas as: (a) designing programs and developing strategies for effectively individualizing instruction to meet the needs of handicapped pupils, (b) developing techniques to enable the classroom teacher to modify inappropriate behavior of handicapped pupils, and (c) adapting curricular materials for use in teaching these pupils. Respondents were most negative with regard to their opinions of the availability of qualified support personnel (i.e., aides, secretaries, etc.) and services needed to teach handicapped

pupils. An additional indication of this lack of support was shown by the fact that eight respondents wrote in "aides" as choice "f" of Part Five of the questionnaire, with another six respondents writing in "specialized materials and equipment."

Summary

In this chapter, the respondents who completed and returned the ARMS instrument were described, data obtained from these respondents were analyzed, research hypotheses were tested, the research question under investigation was answered, and results of opinion surveys were presented. In these surveys, respondents expressed opinions on the types of handicapping conditions they would be willing to accept into their classrooms and on those incentives they considered sufficient encouragement for more readily accepting mainstreaming.

In review, 79 percent of the questionnaires were returned, with 75 percent being usable. Based on demographic information provided by the respondents, it was believed that the sample was representative of the population. The distribution of scores was remarkably normal, indicating a wide range of attitudes toward mainstreaming.

To test the research hypotheses and answer the research question, nine series of correlation analyses were performed. In each of four cases, the null hypothesis was rejected at the .05 significance level, thus indicating the existence of a significant relationship. These relationships were those between teacher attitude toward mainstreaming and each of the following factors: (a) teacher's age, (b) number of years teaching, (c) years of experience with

non-handicapped pupils, and (d) perceived help available. Four relationships were shown not be significant, since null hypotheses regarding these relationships could not be rejected at the .05 level. These relationships involved: (a) the teacher's sex, (b) the grade level taught, (c) the teacher's level of education, and (d) the number of special education courses taken by the teacher.

In only one instance--years of mainstreaming experience--did dual testing (i.e., first with data from all respondents and then with data from a sub-sample consisting only of those respondents with the type of experience being analyzed) lead to apparently conflicting results. As explained earlier, however, while the null hypothesis could be rejected only for the sub-sample, it was concluded that the longer a teacher has taught mainstreamed classes, the more negative his/her attitude about mainstreaming is likely to be.

Recapping the opinion survey, the majority of respondents were most willing to accept hearing- and speech-impaired pupils into their classes. By far the most popular incentive was reduced class size.

Finally, with regard to respondents perceptions of help available, two areas of concern were noted. First, while respondents indicated that special education personnel were generally available and cooperative, they rated them low on their ability to provide specific types of assistance in areas involving handicapped pupils. Secondly, there was a strong indication that schools failed to provide sufficient support services and personnel, particularly aides.

In Chapter V the conclusions from this study will be discussed and recommendations made.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

As stated in Chapter I, since teacher attitudes are a critical part of mainstreaming, it is crucial that administrators and special educators realize the extent to which classroom teachers will support or resist the implementation of any special education programs in which they are required to participate. It was pointed out in Chapter II that while prior research into the effects of mainstreaming on these teachers has been extremely limited, several hypotheses regarding teacher attitudes about mainstreaming have been developed. These hypotheses were incorporated into the present study.

In Chapters III and IV, the investigator outlined the steps taken to measure the attitudes of respondents toward mainstreaming and to determine if these attitudes are influenced by any of the following four factors: (a) teacher demographics, (b) perception of potential help available, (c) handicapping condition, and/or (d) incentives. Based on the results of this study, several conclusions can be drawn.

Conclusions

Measurement of Attitudes

It is possible to group the forty questions of the ARMS instrument according to specific aspects of mainstreaming. Each of these questions relates directly to one or more of the following components

of mainstreaming programs: (a) the mainstreaming philosophy itself, (b) teacher competency and/or responsibilities with regard to mainstreaming, and (c) the handicapped pupils with whom the regular classroom teacher must deal. See Appendix B for questionnaire items.

Each question can be assigned to one or more of the above three categories. While determining the appropriate category or categories for each question requires a certain amount of subjective judgment and could possibly differ from person to person, it is difficult to refute the contention that the positive end of the spectrum of response means (those ranking highest on Table 10) is dominated by items involving attitudes about the mainstreaming philosophy and/or handicapped students and that the response means on items at the negative end of the spectrum (the "low" end of Table 10) most frequently relate to teacher competency and/or responsibilities in implementing mainstreaming programs.

Further indications of teacher concerns about their own competency and responsibilities were evidenced in unsolicited comments implying, rightly or wrongly, that: (a) they needed stronger support from and coordination with special education personnel, (b) the education of the handicapped should be left to those trained in special education techniques, and (c) special education personnel are not willing to accept their share of mainstreaming responsibilities. One respondent even commented that special education teachers have used mainstreaming as a means of reducing their own responsibility by "farming out" their pupils to "over-worked and harassed classroom teachers."

Characteristics

Based on findings from statistical testing of research data, the following conclusions can be drawn regarding the influence of certain demographic characteristics on teacher attitudes about mainstreaming:

Age. From Table 11, analysis of the data from the present study supports hypothesis 1, that there is a relationship between a teacher's attitude toward the mainstreaming of handicapped students into his/her classroom and the teacher's age (Berryman & Berryman, 1981; Buletza, 1979; and Schwartz, et al., 1979).

Sex. From Table 12, analysis of the data from the present study supports hypothesis 2, that there is no difference between male and female teachers with regard to their attitudes toward accepting handicapped pupils into their classrooms (Berryman & Berryman, 1981; Buletza, 1979; Ringlaben & Price, 1981; Schwartz, et al., 1979; Stephens & Braun, 1980).

Grade level taught. From Table 13, analysis of the data from the present study supports hypothesis 3, that there does not appear to be any relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the grade level taught by the teacher (Buletza, 1979; Hudson, Graham, & Warner, 1979; and Ringlaben & Price, 1981).

Educational level. From Table 14, analysis of the data from the present study supports hypothesis 4, that there is no relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the teacher's level of education (Hudson, Graham, & Warner, 1979; Ringlaben & Price, 1981).

Special educational courses taken. From Table 15, analysis of the data from the present study supports hypothesis 5, that there is no relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of special education courses taken by the teacher (Ringlaben & Price, 1981; and Schwartz, et al., 1979).

Total years of teaching experience. From Table 16, analysis of data from the present study refutes hypothesis 6, that there is no relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of years the teacher has taught (Berryman & Berryman, 1981; and Stephens & Braun, 1980).

Number of years teaching mainstreamed classes. From Table 17, analysis of data from the present study supports hypothesis 7, that there is a relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of years the teacher has taught mainstreamed classes (Buletza, 1979; and Schwartz, et al., 1979).

Number of years teaching solely non-handicapped pupils. From Table 18, analysis of data from the present study supports hypothesis 8, that there is a relationship between a teacher's attitude toward accepting handicapped pupils into his/her classroom and the number of years the teacher has taught solely non-handicapped classes (no prior research cited).

From the foregoing, it appears that teacher attitudes about mainstreaming are influenced by certain characteristics; namely,

age and teaching experience. Accordingly, as teachers become older, and as they gain more years of experience—not just total years, but also in years teaching solely non-handicapped pupils and/or teaching mainstreamed classes—they become increasingly negative about mainstreaming.

Perception of Help Available

As indicated in Chapter IV (see Table 19), results of analysis of the data from the present study revealed a strong positive relationship between teacher attitude and help perceived as available. A compelling case can thus be made for the contention that the more help a regular classroom teacher perceives as being available in coping with handicapped pupils, the more positive his/her attitude about mainstreaming will be.

Handicapping Condition

Since data relating to handicapping condition were not subjected to statistical analysis, no conclusion can be drawn as to whether or not this factor influences a teacher's overall attitude about mainstreaming. Nonetheless, it would appear from the figures shown in Table 20, that while most teachers are willing to accept some handicapped pupils into their classrooms, only a few are willing to accept a full range of disabilities. To illustrate this point, 93 percent of the respondents expressed a willingness to accept speech-impaired pupils into their classrooms, while only 35 percent were willing to accept emotionally impaired or deaf pupils.

Incentives

Since data relating to incentives were likewise not subjected to statistical analysis, no conclusion can be drawn as to whether or not this factor influences a teacher's overall attitude about mainstreaming. Nonetheless, it would appear that there indeed are incentives which could encourage regular classroom teachers to more readily accept mainstreaming. As shown in Table 24, a total of 320 of 336 respondents indicated that at least one incentive would effectively induce them to more readily accept mainstreaming.

Based on respondent preferences, the most effective incentive which could be offered is reduced class size. Also selected by respondents as desirable incentives were, in descending order of preference, the following: (a) increased preparation time, (b) team teaching with a special educator on a full-time basis, (c) increased in-service training, (d) stipend, (e) increased support services from special education personnel, (f) more specialized materials and/or equipment, (g) certified aides, (h) ability to have mainstreamed pupils removed from class if unable to cope, (i) reduced number of handicapped pupils per class, (j) exclusion of emotionally impaired pupils from regular class placement, and (k) alternatives to traditional grading systems.

While the stipend ranked fairly high on the above list, it must be kept in mind that it ranked lowest among the five choices listed in the questionnaire; all incentives following it on the above list were written in by one or more of the respondents marking "other."

One implication of this fact is that teachers involved in mainstreaming appear to be much more concerned about class size, preparation time, and training than they are about money.

Recommendations

Since regular classroom teachers must make major adjustments in their teaching methods to accommodate the handicapped, the ultimate success of any mainstreaming program depends to a great extent on their willingness to make such adjustments. Findings from the present study indicated that there is a high degree of correlation between a regular teacher's perception of help available and his/her attitude toward mainstreaming.

The two groups most directly responsible for providing such help are special education personnel and administrators. It is therefore recommended that special educators maintain a high degree of visibility with regular classroom teachers, both in serving pupils they have in common and in helping them adapt materials and curricula to meet individual needs of students. Administrators--those in central offices who set policies and those in the schools who supervise their implementation--should provide their teachers as much psychological and material support as possible, setting up an environment conducive to full cooperation among regular teachers, special educators, and administrators. Although a successful mainstreaming program cannot be guaranteed by following these recommendations, cooperation and mutual assistance among all those involved in running such a program certainly should help allay the fears and anxieties expressed by many

respondents to the Attitude Regarding Mainstreaming Survey.

Further research. In order to offer more specific guidance to those involved in the implementation of mainstreaming programs, it is recommended that further research be undertaken to identify specific types of assistance which could be provided by administrators and special educators to improve teacher attitudes toward mainstreaming. Such an investigation could involve statistical analysis of data similar to those collected in the present survey on opinions regarding the existence and effectiveness of incentives offered to enhance acceptance of mainstreaming. Furthermore, in order to expand the generalizability of the results from the present study, it is recommended that the ARMS be tested with a variety of populations.

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APPENDICES

APPENDIX A

Base Chronology

APPENDIX A

Base Chronology

- 1784 - First actual school for the blind established in Paris
- 1790 - "Wild Boy of Aveyron", France
- 1802 - Gall publishes first account of "specific learning disabilities"
- 1817 - First American Asylum for the education of the deaf and dumb
- 1831 - Establishment of Perkins School for the Blind in Watertown, Massachusetts
- 1843 - Dorothea Dix advocates change in treatment of mentally ill
- 1846 - Edouard Seguin's book, The Moral Treatment, Hygiene, and Education of Idiots and Other Backward Children
- 1852 - First compulsory education law
- 1868 - 14th amendment (rights of citizens)
- 1871 - First ungraded school for disruptive children in America
- 1902 - Initiation of Department of Special Education as part of NEA (resulting from recommendations of Dr. Alexander Graham Bell)
- 1946 - New York City organizes special schools for emotionally disturbed children
- 1954 - Establishment of National Association for Retarded Citizens
 - Brown vs. Board of Education establishes education as a "right" for all children
- 1958 - Public Law 85-926 provides funds to train teachers of the mentally retarded
- 1961 - John F. Kennedy appoints a National Panel on Mental Retardation
- 1963 - Public Law 88-164 provides funds for training personnel to serve other major handicapping conditions
 - Establishment of Association for Children with Learning Disabilities

- 1964 - Findings of studies on the efficacy of special classes
- 1965 - Public Law 89-10 focuses on educationally disadvantaged children
- 1966 - Public Law 89-750 establishes the Bureau of Education for the Handicapped
 - President Lyndon Johnson appoints the President's Committee on Mental Retardation
- 1967 - Hobson vs. Hansen prohibits "tracking" systems
- 1968 - Dunn postulates the discrimination of minority children by standardized testing
 - Arreola vs. Board of Education establishes the role of parental participation in educational placement decisions
 - Establishment of Special Olympics
- 1969 - Public Law 91-230 adds learning disabilities to the list of handicapping conditions
- 1970 - Diana vs. State Board of Education mandates that special education placement not violate a student's rights
 - Stewart vs. Phillips establishes a "Commission on Individual Educational Needs" to oversee evaluations and programming for special education students
 - Spangler vs. Board of Education establishes the discrimination of "interclass grouping" based on intelligence tests and teacher recommendations
- 1971 - Penn. Association for Retarded Children (PARC) vs. Commonwealth of Pennsylvania on behalf of every excluded child in the state
 - Wyatt vs. Stickney establishes the right of each special needs student to an individually designed educational plan in the least restrictive environment
- 1972 - Mills vs. D. C. Board of Education rules that no child can be excluded from public education because of a handicap
- 1973 - Public Law 93-112 guarantees nondiscrimination in employment practices, program accessibility, and postsecondary education
- 1974 - Lau vs. Nichols asserts that appropriate programs must be made available for all students.

- Public Law 93-380 directs all states to plan for all handicapped children

1975 - Public Law 94-142 provides needed programs and services to all handicapped between the ages of 3 and 21

APPENDIX B

Attitude Regarding Mainstreaming Survey

ATTITUDE

REGARDING

MAINSTREAMING

SURVEY

This questionnaire was designed to help the investigator examine attitudes of regular classroom teachers toward mainstreaming of special needs students into their classes. The findings, to be published in a doctoral dissertation, will be provided to the Macomb Intermediate School District to be made available to school systems within the District. Your cooperation in providing frank and accurate responses to the questions will help ensure that these findings reflect the true feelings of you and your fellow teachers, and that any planning done by school systems on the basis of this information will be sound and realistic. Thank you for promptly completing and returning the questionnaire.

PART ONE: Definitions

Mainstreaming. Integration of special needs (handicapped) pupils into regular classrooms for part or all of the school day.

Learning disabled pupils. Those of average or above average I.Q. who exhibit disorders in one or more of the basic learning processes involved in understanding or using spoken or written language.

Emotionally impaired pupils. Those who are disruptive, have temper outbursts, are frequently disobedient, and/or are withdrawn. They sometimes also exhibit symptoms of psychosis, schizophrenia or autism.

Educably mentally retarded pupils. Those with the mildest form of retardation. It is anticipated that such pupils will eventually be able to work and live independently.

Physically disabled pupils. Those of average or above average I.Q. but who are limited by physical or health conditions so that special equipment, materials, or facilities are necessary. Included in this group are those in wheelchairs, braces, etc.

PART TWO: Description of Respondent

You are requested to provide a demographic description of yourself. No attempt will be made to identify individual respondents, these questions are included only for statistical testing of the data. Please provide as accurate a description as you can. For each item, fill in the box with the appropriate number:

- YOUR AGE (Years)
- YOUR SEX (1-Male; 2-Female)
- YOUR EDUCATION (1-Bachelors; 2-Masters; 3-Specialist; 4-Doctorate)
- TOTAL TEACHING EXPERIENCE (Years, including current year)
- EXPERIENCE TEACHING ONLY NON-HANDICAPPED PUPILS (Years, including current year)
- NUMBER OF SPECIAL EDUCATION COURSES TAKEN (Courses, not hours)
- GRADE LEVEL YOU TEACH AT PRESENT (If you teach more than one grade level, refer to cover letter for instructions)

PART THREE: Agree/Disagree Questions

If you are now or have ever been involved in mainstreaming, answer the following questions as they apply to your present and/or past involvement in such a program. If, on the other hand, you have never participated in mainstreaming, answer them as you perceive your situation **would be** if you were so involved. These questions require you to rank your responses on a scale from one to five (from "1" if you strongly agree to "5" if you strongly disagree). Please respond to each question by circling the **one answer** which most closely describes your opinion.

1-Strongly Agree 2-Agree 3-Neutral 4-Disagree 5-Strongly Disagree

Response

1. Qualified special education personnel (psychologists, social workers, teacher consultants, etc.) are available to assist me in teaching handicapped pupils..... 1 2 3 4 5
2. Qualified personnel (aides, secretaries, etc.) are available to provide me with the support services needed to teach handicapped pupils..... 1 2 3 4 5
3. I have access to adequate equipment (audiovisual, duplicating, etc.) and materials (paper, books, handouts, workbooks, etc.) to effectively teach handicapped pupils in my classroom..... 1 2 3 4 5
4. The special education personnel referred to in item #1 work cooperatively with me in dealing with handicapped pupils in my classroom..... 1 2 3 4 5
5. Special education personnel have helped me design programs and develop strategies for effectively individualizing instruction to meet the needs of handicapped pupils..... 1 2 3 4 5
6. Special education personnel have helped me develop techniques which enable me to modify inappropriate behavior of handicapped pupils who have been mainstreamed into my classroom..... 1 2 3 4 5
7. Special education personnel have assisted me in adapting curricular materials for use in teaching handicapped pupils..... 1 2 3 4 5
8. In general, the special education personnel assigned to work with me have helped me cope with handicapped pupils who have been mainstreamed into my classroom..... 1 2 3 4 5

	1-Strongly Agree	2-Agree	3-Neutral	4-Disagree	5-Strongly Disagree	
						<u>Response</u>
9. Mainstreaming requires an unrealistic amount of teacher preparation time.....						1 2 3 4 5
10. Mainstreaming emphasizes the similarities of handicapped pupils with non-handicapped pupils.....						1 2 3 4 5
11. Mainstreaming breaks down the traditional boundaries between general and special education.....						1 2 3 4 5
12. Mainstreaming is a method of retaining unqualified pupils in the general education program without effective supportive services or specialized materials.....						1 2 3 4 5
13. Pupils placed into a special education program are often the object of discrimination.....						1 2 3 4 5
14. Mainstreaming is an approach which ignores the fact that some pupils require a more specialized learning program than can be provided in general education.....						1 2 3 4 5
15. Mainstreaming provides the most appropriate education for each pupil in the least restrictive environment.....						1 2 3 4 5
16. If I had a choice, I would not participate in mainstreaming.....						1 2 3 4 5
17. Mainstreaming unites the skills of general and special educators.....						1 2 3 4 5
18. Mainstreaming creates alternatives to assist general education in servicing pupils who demonstrate learning and/or adjustment problems.....						1 2 3 4 5
19. Mainstreaming encourages systematic communication between general and special education teachers.....						1 2 3 4 5
20. Mainstreaming is a multi-faceted problem which will be resolved by the joint efforts of general and special education teachers.....						1 2 3 4 5
21. Teaching in a general education classroom is difficult enough without the additional burden of mainstreamed pupils.....						1 2 3 4 5

	1-Strongly Agree	2-Agree	3-Neutral	4-Disagree	5-Strongly Disagree	
						<u>Response</u>
22. Mainstreaming will eventually lead to the discontinuation of the self-contained special education classroom.....						1 2 3 4 5
23. Mainstreaming helps to foster positive social attitudes toward the handicapped.....						1 2 3 4 5
24. Mainstreaming ensures equal educational opportunities for all handicapped pupils.....						1 2 3 4 5
25. Mainstreaming was designed to save money spent on expensive special education programs by the state and local school districts.....						1 2 3 4 5
26. Mainstreaming increases social acceptance of the handicapped pupil by his/her peers.....						1 2 3 4 5
27. Mainstreaming increases social problems among pupils.....						1 2 3 4 5
28. General education teachers should receive a stipend for serving handicapped pupils.....						1 2 3 4 5
29. Most general education teachers aren't prepared to teach the handicapped.						1 2 3 4 5
30. Mainstreaming contributes to excessive teacher stress and anxiety.....						1 2 3 4 5
31. It is the sole responsibility of special education to diagnose, prescribe, remediate and evaluate any problems that may be demonstrated by a mainstreamed pupil.....						1 2 3 4 5
32. Integration of handicapped and non-handicapped pupils is preferable to separate but equal programs.....						1 2 3 4 5
33. Mainstreaming leads to excessive problems in scheduling activities.....						1 2 3 4 5
34. General education teachers should have the ability to design and organize materials for mainstreamed pupils.....						1 2 3 4 5
35. The focus in serving handicapped pupils within the school environment should be placed upon educational needs rather than clinical or diagnostic labels.....						1 2 3 4 5

	1-Strongly Agree	2-Agree	3-Neutral	4-Disagree	5-Strongly Disagree	
						<u>Response</u>
36. I am willing to individualize instruction in an effort to meet the needs of handicapped mainstreamed pupils.....	1	2	3	4	5	
37. Group needs have a higher precedence than individual needs.....	1	2	3	4	5	
38. Education of the handicapped pupil should be considered an integral part of the total school program.....	1	2	3	4	5	
39. It is extremely difficult to adjust the general education curriculum to meet the needs of the mainstreamed pupil.....	1	2	3	4	5	
40. Individualized instruction will solve many of the instructional problems presented by mainstreamed pupils.....	1	2	3	4	5	
41. Most mainstreamed pupils are not motivated to learn.....	1	2	3	4	5	
42. The mainstreamed pupil requires more support and reinforcement than the general education teacher has time to provide.....	1	2	3	4	5	
43. Given the present structure of general education, it is not practical to meet the individual needs of the mainstreamed pupil.....	1	2	3	4	5	
44. Mainstreaming is beneficial to the personality development of both the handicapped and the non-handicapped pupil.....	1	2	3	4	5	
45. Typically, mainstreamed pupils are returned to general education without adequate attention to the ability of that environment to meet the needs of that pupil.....	1	2	3	4	5	
46. Mainstreamed pupils are more similar to regular pupils than they are dissimilar.....	1	2	3	4	5	
47. Mainstreamed pupils present no more of a discipline problem than do regular pupils.....	1	2	3	4	5	
48. Mainstreaming forces handicapped pupils into unfair competition with regular pupils.....	1	2	3	4	5	

PART FOUR: Respond to each part of this question by circling "YES" or "NO".

49. Would you be willing to have any of the following types of pupils mainstreamed into your classroom?

Learning disabled (See definition).....	YES	NO
Emotionally impaired (See definition).....	YES	NO
Educably mentally retarded (See definition).....	YES	NO
Physically disabled (See definition).....	YES	NO
Hearing impaired (those requiring hearing aids, etc., but not deaf).....	YES	NO
Visually impaired (those requiring large print, etc., but not blind).....	YES	NO
Speech impaired (those who stutter, have speech impediments, etc.).....	YES	NO
Cerebral palsied (unable to control movement of one or more limbs).....	YES	NO
Blind	YES	NO
Deaf	YES	NO
Physically deformed	YES	NO
Epileptic	YES	NO

PART FIVE: Teacher Incentives

50. From the following list of options, circle the letter(s) of any which, if offered to you by your school system, would encourage **you** to more readily accept mainstreamed pupils into your classroom?

- a. Team-teaching with special educator on full-time basis
- b. Increased preparation time (fewer teaching hours)
- c. Increased in-service training
- d. Stipend (annual bonus added to regular salary)
- e. Reduced class size
- f. Other (please specify) _____

51. Of the options you selected in question 50, please rank your choices in order of preference by placing the letter of each choice in the appropriate box below:

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice	6th choice

APPENDIX C

Sample Letter to Principal

September 29, 1982

Mr. John Doe, Principal
(School Name)
(School Address)

Dear Mr. Doe:

As a teacher in Roseville and a doctoral student at Western Michigan University currently conducting a study on teacher attitudes about mainstreaming, I would be most grateful if you would take a few minutes of your time to deliver the enclosed questionnaire to two of your teachers--one teaching the 3rd grade and the other the 5th grade--chosen by you at random.

The purpose of this study is to assess the feelings of those most directly involved in the mainstreaming process--classroom teachers themselves. The questionnaire solicits the opinions of a randomly selected sample of Macomb County regular classroom teachers on a number of issues related to mainstreaming in theory and in practice, as well as their suggestions on how school districts might provide incentives to them to enhance their acceptance of such programs. The findings will be provided to the Macomb Intermediate School District and thus made available to all school systems within the District to allow officials in these systems to better plan their mainstreaming programs.

I know that the beginning of the school year can be a most hectic time to participate in a survey, but special education laws do touch most of us in some way. This survey could ultimately help to make the roles you and your teachers play in implementing mainstreaming programs easier and more meaningful.

If you have any questions or concerns about this study please call me at . . . (paragraph contained telephone number of investigator, as well as name, address, and telephone number of dissertation committee chairman).

Thank you for your time and help.

Sincerely,

/s/ (signature)
Dorothy M. Elkins

/s/ (signature)
(Committee Chairman)

APPENDIX D

Follow-up Letter to Principal

November 15, 1982

Mr. John Doe, Principal
(School Name)
(School Address)

Dear Mr. Doe:

On September 29th, I forwarded to you two questionnaires with a request that you distribute them to a 3rd grade teacher and a 5th grade teacher. The cover letter accompanying the questionnaires explained the nature of the study I have undertaken regarding attitudes of regular classroom teachers toward mainstreaming. As of today I have not received any completed questionnaires from teachers in your school.

Realizing that there are many possible reasons for my not having received these questionnaires, I beg your indulgence in asking you to check with the teachers to whom you gave the questionnaires to find out whether or not they have completed and returned them and, if not, to impress upon them the importance of doing so at this time. Since there is a very good chance they have simply misplaced the questionnaires, I am enclosing a new one for each. Please distribute them to the same teachers as before.

I apologize for any inconvenience this follow-up mailing may cause, but I simply must increase the response rate to lend greater statistical significance to the results which, by the way, are turning out to be quite impressive. As I stated in my first letter, special education laws do touch most of us in some way, and the results from this survey could ultimately help to make the roles you and your teachers play in implementing mainstreaming programs easier and more meaningful.

If you have any questions or concerns about this study please call me at . . . (paragraph contained telephone number of investigator, as well as name, address, and telephone number of dissertation committee chairman).

Thank you once again for your time and help.

Sincerely,

Dorothy M. Elkins

APPENDIX E

Cover Letter to Teacher

Department of Educational Leadership
Western Michigan University
Kalamazoo, Michigan

Dear Teacher:

As a fellow teacher in Macomb County, I am seeking your assistance in a survey of teacher attitudes about mainstreaming currently being undertaken as part of a doctoral dissertation and on behalf of the Macomb Intermediate School District. The purpose of this survey is to assess current perceptions, apprehensions and concerns of regular classroom teachers toward programs which involve the mainstreaming of handicapped students into their classrooms. It also solicits your opinion of the effectiveness of various incentives which could be offered to teachers to enhance their acceptance of mainstreaming. The Macomb Intermediate School District will make the findings from this study available to all member systems. By responding to this questionnaire, you will directly be contributing to a wealth of information which can be utilized by school systems, including your own, to plan more realistic mainstreaming programs. Since those of you scientifically selected to receive this questionnaire comprise only about 7% of the teachers in Macomb County, your input is most invaluable to the study.

I know that the beginning of the school year can be a most hectic time to participate in a survey, but special education laws do touch most of us in some way. This survey could ultimately help make your role in implementing mainstreaming programs easier and more meaningful.

I would be most grateful if you would return the questionnaire in the enclosed stamped, self-addressed envelope within ten days.

Thank you for your help.

Sincerely,

/s/ (signature)
Dorothy M. Elkins

(Note: In the follow-up mailing, the same letter was used, with the following postscript added: "Because your responses to this questionnaire are vital to the results of this important study, I urge you to take the time to complete it and mail it back to me as soon as possible. Thank you very much.")

APPENDIX F

Glossary of Terms

APPENDIX F

Glossary of Terms

Educably Mentally Retarded. Educably mentally retarded pupils are those with the mildest form of retardation. It is anticipated that such pupils will eventually be able to work and live independently (Haring, 1982).

Efficacy Study. Efficacy is the power to produce a desired or intended result (Webster, 1971).

Emotionally Impaired. Emotionally impaired pupils are those who cannot manage their emotions nor maintain them within the range of acceptability (Gearheart, 1980).

Individualized Educational Program (IEP). An IEP is a written statement documenting decisions reached about the objectives, content, implementation and evaluation of a handicapped child's educational program (Gearheart, 1980).

Learning Disabled. Learning disabled pupils are those who are not primarily mentally retarded, emotionally impaired, or sensorily handicapped, but who exhibit disorders in one or more of the basic learning processes involved in understanding or using spoken or written language (Lerner, 1971).

Multi-handicapped. Multi-handicapped pupils are those who have more than one handicap (Gearheart, 1980).

Perceptions. Perceptions are the integration of sensory impressions of events in the external world by a conscious organism, especially as a function of non-conscious expectations derived from

past experience and serving as a basis for or as verified by further meaningful motivated actions (Webster, 1971).

Physically Handicapped. Physically handicapped pupils are those who are limited by physical or health conditions so that special equipment, such as wheelchairs and braces, materials, or facilities are necessary, but does not include conditions such as mental retardation, emotional disturbance, blindness, deafness, or learning disability (Gearheart, 1980).

Resource Room. A resource room is a place where a teacher is available to work with individuals or small groups of students who have specific learning difficulties (Haring, 1982).

Severely Retarded. Severely retarded pupils are those who will need lifetime supervision in social and academic functioning and daily living skills. They usually have a measured intelligence of below 25 (Gearheart, 1980).

Sociometric Study. A sociometric study is concerned with interrelationships of individuals within a social group (Webster, 1971).

Special Class. A special class is one composed entirely of exceptional children who do not participate in regular academic programs with their normal peers (Haring, 1982).

Special Education. Special education consists of programs and services designed to develop the maximum potential of each handicapped person (Michigan General School Laws, 1796, parts 380.1701-380.1703, 380.1711-380.1743, and 380.1751-380.1766).

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