

AN EXAMINATION OF THE ATTITUDES OF TEACHERS TOWARD
THE INTEGRATION OF HANDICAPPED CHILDREN

by



LORRAINE G. FROST

Thesis presented to the School of Graduate Studies
in partial fulfillment of the requirements
for the degree of Master of Education

University of Manitoba
Winnipeg, Canada

1984

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Abstract Of:

An Examination of the Attitudes of Teachers Toward the
Integration of Handicapped Students

The purpose of the study was to investigate teachers' attitudes toward integrating handicapped (LD, ED, MH) students and the relationship of these attitudes to certain factors. These factors were type of handicap, severity of handicap, professional status, province of origin, age, sex, highest degree earned and grade level taught. The population selected was that of teachers of the elementary grades. The sample included 50 teachers from each of Ontario and Manitoba and 50 student teachers from the same provinces, yielding a sample of 200 subjects. The subjects were surveyed with the Rucker-Gable Programming Scale (Rucker and Gable, 1974) and the Demographic Data Sheet composed by the writer. A significant relationship was found between teachers' attitudes and the following factors: type of handicap, severity of handicap, professional status, sex, grade level taught, and highest degree earned. No relationship was found between attitude and the factors; province of origin, and age. Recommendations for further research included replication of the study to verify the findings, probing the specific effects of the various factors on attitude, alternate means of measuring teacher attitudes and longitudinal cross-country sampling.

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CHAPTER 1

INTRODUCTION

The Problem to be Investigated

The purpose of the study reported in this thesis was to investigate the attitudes of teachers toward the integration of handicapped children into the regular classroom. The following general research question was formulated:

What are the attitudes of teachers toward the integration of handicapped children into the regular classroom?

Further refining of the problem resulted in the development of two more detailed and specific research questions. These questions reflect the dimensions of the major components of the general research question chosen for this study. It is these questions, stated below, which guided the study.

- (1) Will teachers' attitudes toward the integration of emotionally disturbed, mentally handicapped and learning disabled children differ as a function of their professional status (student teacher versus elementary teacher) and their province (Manitoba versus Ontario)?
- (2) Will teachers' attitudes toward the integration of mildly handicapped, moderately handicapped, and severely handicapped children differ as a function of their professional status (student teacher versus elementary teacher) and their province (Manitoba versus Ontario)?

An ancillary research question was also posed and is stated below.

- (3) What is the relationship of the demographic variables of age, sex, highest degree earned and grade level taught to teachers' attitudes towards integration?

Definition of Terms:

For the purpose of this thesis, the following terms will have the given definitions:

(1) Attitude: A mental state of readiness and/or a cluster of perceptions which predisposes an individual to behave in a particular manner toward the construct with which it is related (Allport, 1935; Osgood, Succi and Farnenbaum, 1957).

(2) Attitude Toward Integrating Handicapped Children: Also Attitude Toward Integration: A mental state of readiness and/or a cluster of perceptions regarding integration which predisposes an individual to behave in a particular manner toward integration. Translated into behavioural terms, this might result in the Rucker and Gable (1974) definition: "a measure of the social distance a teacher wants to maintain between herself or himself and a variety of types and degrees of handicapping conditions" (Rucker and Gable, 1974, p. 5). Hence, an indication of how accepting teachers are of integration is inherent in the definition.

(3) Integration: Refers to the placing of handicapped children in the regular classroom for instructional purposes. This placement may be for part or all of the school day and may or may not entail support services.

(4) Least Restrictive Environment: The educational placement that is closest to the regular classroom while providing appropriately for the child's needs.

(5) Handicapped Children: Those children who require modifications in the regular school programme in order that their educational needs will be met. These children's special characteristics are due to mental, socio-emotional, or physical characteristics which necessitate adapted educational programming. Also used in this thesis: Exceptional Children, Special Needs Children, Special Students.

(6) Mentally Handicapped: Those students who display significantly subaverage general intellectual functioning which is usually associated with deficits in adaptive behaviour and which is manifested during the developmental period.

(7) Learning Disabled: Those students who evidence a significant specific achievement deficiency, have adequate overall intelligence and whose learning problem are not due to environmental disadvantage nor mental handicap.

(8) Emotionally Disturbed: Those students whose behavior interferes with their own development. These children may be withdrawn or may be in repeated conflict with other people.

(9) Elementary Teachers: Also Classroom Teachers, Regular Elementary Classroom Teachers: Those teachers who instruct grades Kindergarten to six in a regular education programme.

(10) Student Teachers: Students who are enrolled in a teacher training program. (In this study, the preservice teachers were in one year teacher training programmes after attaining a first degree in an academic area.

Background of the Study

During the last decade, Departments of Education in all ten provinces of Canada have addressed issues concerning special education services in general, and the integration of handicapped students into regular education settings in particular. In all cases, statements, policies and regulations have been set forth which are in favour of the principle of integration. The degree of support for this service delivery model varies from province to province as does the level of provincial funding available (Karagianis and Nesbit, 1980).

Perhaps the strongest and most clearly stated endorsements of integration for handicapped students come from the Provinces of Quebec, Manitoba and Saskatchewan. These provinces have issued policies or statements which designate the regular classroom, or a placement as close to the regular classroom as possible, as the most desirable for handicapped children. Local authorities are responsible for providing the support services necessary to effect integration (Csapo and Goguen, 1980; Karagianis and Nesbit, 1980). Prince Edward Island, New Brunswick and Ontario officially support the integration of handicapped students, but their policy statements are not accompanied by strong philosophical statements subscribing to the need for integration as in the first provinces discussed. While integration is favoured, less provision is made to extend this service to as many handicapped children as possible (Csapo and Goguen, 1980; Karagianis and Nesbit, 1980). In Ontario, Bill 82 mandates that special education services be provided to all exceptional children by September, 1985. Integration is not necessary, however, to meet the requirements of the Bill. Newfoundland and

Alberta recognize integration as a viable educational alternative but approach with caution the provision of this service to a wide variety of handicapped children (Csapo and Goguen, 1980; Karagianis and Nesbit, 1980). In Nova Scotia and British Columbia, handicapped children can be excluded from the school system if the services required are not currently provided. Thus, the responsibility for the child seems to rest with the parents or social agencies such as Childrens' Aid or Departments of Health and Social Welfare, rather than the school system. In spite of this evasion of total responsibility, both Nova Scotia and British Columbia lend official support to integration (Csapo and Goguen, 1980; Karagianis and Nesbit, 1980).

Thus, integration of handicapped children in the regular educational environment is a strategy which is being implemented to some degree in all areas of Canada. This service delivery model is relatively new in some regions, familiar in others. It is evident, however, that the integration of special students into regular education settings has become a common feature on the Canadian Educational scene. A review of the literature indicates that there are insufficient data on Canadian educators' attitudes toward the integration of handicapped children into the regular classroom.

Larrivee and Cook (1979) state: "While integration may be imposed by binding laws, the manner in which the regular classroom teachers respond 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" (p. 316). Knowledge of those factors which may influence the manner in which a teacher provides for

the handicapped child in the regular classroom is of great interest to any educator involved in implementing integration. In order to help ensure the success of the strategy, those responsible for programmes integrating handicapped children need to know which variables impede or promote this process. This thesis proposes to examine one potential determinant of success or failure in implementing integration; that of teacher attitudes toward the placing of handicapped children into the regular classroom.

Significance of the Study

Little work has been done in the field to assess teachers' attitudes toward integration. The proposed research may provide the following contributions:

- (1) An extensive assessment of teachers' attitudes toward integration, using a reliable instrument, will be made available.
- (2) The descriptive statistics obtained may be useful to decision-makers who are, or will be, integrating handicapped children.
- (3) Information gained concerning teacher attitudes may provide administrators with a basis upon which to predict teachers' reactions to an integration strategy.
- (4) Educators may be furnished with information that might assist them in salvaging integration programmes that appear to be failing.
- (5) Since attitudes can be improved through various means, knowledge of attitudes may lend guidance in planning long range professional development activities for attitudinal change.

(6) University teacher education programmes could be modified to ensure that student teachers do not enter the field without having had the opportunity to develop positive attitudes toward the integration of handicapped students into the regular classroom.

(7) Knowledge of teachers' attitudes in this important area of education may facilitate programme development and implementation that will be of maximal benefit to the handicapped child.

Summary

The writer investigated the attitudes of student teachers and elementary teachers toward the integration of handicapped children into the regular classroom as a function of province of origin and type and severity of handicap. In addition, the relationship of certain demographic variables to these general attitudes toward integration was also examined. This study was considered of importance in the light of the increased support integration has been receiving from Departments of Education in all parts of the country. With increasing demands upon teachers to accept handicapped children in the regular classroom, the attitudes of these professionals take on greater significance in the success or failure of integration. This study made a variety of contributions to the field in that it will provide an information base where little has existed before. The effects of the study may be felt by those implementing integration programmes and by those preparing teachers for the field. It is hoped that the ultimate outcome of the study will be to provide better educational opportunities for handicapped children.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents the review of the literature relevant to the problem. This review is broken into four parts: the rationale for integrating handicapped students, teacher attitudes toward integration, the relationship of demographic characteristic to teacher attitude towards integration and Canadian research investigating attitudes toward integration.

THE RATIONALE FOR INTEGRATING HANDICAPPED STUDENTS

In the early 70's, mounting evidence from the research literature called into question in both Canada and the United States, the practice of placing handicapped children into segregated educational settings. While such an arrangement may have been appropriate for some children, it was certain that in the past segregated classes had been prescribed for far too many children. This was especially true for children who fell into the mild range of handicap. A great deal of research from this era can be found which dealt with the Educable Mentally Handicapped (EMH) student and the desirability of integrating this type of student into the regular classroom. Representative examples of this research are discussed below. Little or no consideration was given to integrating children with more severe levels of mental handicap. Only marginal attention was devoted to other areas of handicap such as the Learning Disabled (LD) and the Emotionally Disturbed (ED). One could expect

this in the case of the LD since the field was in a relatively fledgling state. The construct of LD was being formulated and strategies for dealing with these children still in a preliminary state of development. Perhaps where ED children were concerned, regular class placement was not considered by researchers and writers because of the needs of these children which extended beyond their academic needs. The major portion of the literature from this time is, however, directed toward the EMH student. In the following section, research which investigated the efficacy of special class placement for EMH, LD, and ED students is discussed.

The Mentally Handicapped Student

Studies conducted into the efficacy of special class placement for EMH students generally concluded that segregation was not in the best interests of these children. A number of researchers found that matched groups of EMH students in regular and special class settings showed no or little difference in their academic performance, even when followed for long periods. A detailed discussion of examples of these studies follows.

Bradfield, Brown, Kaplan, Rickett and Stannard (1973) investigated the plausibility of integrating EMH and educationally handicapped (EH) (mainly LD) children into the regular classroom. During the first year of the project, three EMH students and three EH students were placed in a grade three classroom, resulting in a class size of 28. The teacher was given a teacher's aide. She was instructed by the project directors in the use of a learning centre approach to individualization and in the

use of behaviour modification techniques. Controls were selected from special classes for the EMH and EH students and from regular classrooms for the rest of the students. At the end of the first year, there was no difference in academic achievement between the two groups of handicapped students. However the non-handicapped students in the "model" class showed achievement which was a bit lower than their counterparts in non-integrated classrooms.

During the second year of the project, the orientation of the instruction was changed to one of precision teaching with a deemphasis on the learning centres. A grade four class was added to the project. Another change was the use of cross-age tutoring. Again, controls were selected for both the handicapped and non-handicapped students. Pre- and post-testing of academic achievement in reading, spelling and arithmetic was conducted for all students in the project.

At the end of the second year, results indicated that there were no significant differences in achievement between the two groups of non-handicapped students. In the case of the special students, significant differences in achievement were found in some academic areas favouring the integrated children. There was a significant difference in mathematics achievement, between the integrated and segregated grade three EH students. However, these two groups showed no significant differences on reading and spelling measures. There were no significant differences between the two groups of EMH students at this level. At the grade four level, there were no significant differences between the two groups of EH students. The integrated EMH students at this level demonstrated superior performance in reading and arithmetic. The authors

expressed some concern about interpreting the findings due to the difficulty in controlling teaching methods from class to class. They concluded however, that exceptional children can be successfully maintained in the regular classroom without detriment to the non-handicapped members of the class.

Carroll (1967) investigated self-concept and academic gains in two groups of EMH students, (IQ 60-80), who had received no special education services prior to the time of the study. In this study, the students were integrated into a regular classroom for half days, instead of all day as in the Bradfield study. One group of twenty students, with a mean chronological age of 8.77 years, was placed in segregated special classes all day. The other group of nineteen with a mean chronological age of 8.16 years, was placed in special classes for half of the day and spent the other half day in regular classes. Pre-tests were conducted during the first month of school and post-tests after eight months. The integrated students were found to have made significantly better gains in reading and self-concept. There were no differences in gains in spelling and arithmetic.

Goldstein, Moss and Jordan (1965) randomly assigned 126 EMH children to regular classes and special classes. Over the next four years, the students were tested periodically. At the end of the study it was found that there were no significant differences between the groups in I.Q. gains and academic achievement. With respect to socio-emotional adjustment, the special class students seemed less rejected and/or isolated than the EMH students in the regular classrooms. Other researchers also found that EMH students in regular or special class

settings performed similarly in their academic achievement (Ainsworth, 1959; Cegalka and Tyler, 1970).

Some research studies conducted in the early '70's or prior to that time, found that handicapped students placed in regular classes evidenced superior academic achievement when compared with special class students. Cassidy and Stanton (1959) selected a large sample of EMH students to investigate the merits of special class versus regular class placement. The students were all 12.0 to 14.11 years old and had IQ's in the 50-75 range. One hundred students were randomly selected from special class settings and an equal number from regular classes, representing a total of 36 schools. The latter group had never been referred for special education services but rather were sought out for the purposes of the study. This could be construed as a contaminating variable since the regular class children seemed to have been functioning adequately, having never appeared to be candidates for specialized help. An extensive battery of tests was administered to each student. The regular class children gave evidence of better academic achievement, while the special class children seemed to be better adjusted socially.

Thurstone (1959) conducted a study similar to that of Cassidy and Stanton but on a much larger scale. An important difference, however was that the EMH students in the regular classes had been identified as such prior to the study. The students were elementary age with IQ's in the 50-79 range. There were 767 students in special classes and 503 in regular classes. The main focus of the study was comparing regular versus special class placement, but the effects of age, sex

race and IQ were also investigated. At the beginning of the project, testing revealed that the regular class students were functioning at higher levels of academic achievement. In examining comparable sub-groups in the two conditions (for example, regular class girls versus special class girls) it was found that the regular students were always more advanced academically. All students in the studies were re-tested one year later. The differences in achievement indicated that the regular class students had progressed more rapidly than their counterparts, and that the differences in rate of progress were highly significant. A noteworthy finding that emerged from the study's examinations of sub-groupings was that in the special classes, the higher IQ students were not progressing as quickly as the lower IQ students. While the higher IQ students had levels of achievement which were better than the lower IQ students, the authors noted that if the present pattern persisted, the differences between the two groups would continually diminish. The authors did not offer an interpretation for this finding. It is the contention of this writer that the finding demonstrates the special class placement became increasingly inappropriate as the students became more capable. Their peers in the regular class were demonstrating far superior levels of achievement, so it is reasonable to assume the more capable students in the special classes would have benefited more from regular class placement. The general finding, however, was that all groupings of regular class students were superior academically, and therefore that the regular classroom placement was more desirable. This would appear to have been especially true of the more capable students.

Contradictory to the Cassidy and Stanton (1959) findings, Guerin and Szatlocky (1974) found EMH students in integrated settings to have made better social adjustments. In surveying eight school districts, they found four models of integration in use, resulting in differing levels of integration. The more highly integrated the students were, the more acceptable was their behaviour and the more it resembled that of the regular classroom students in general. Hence, it was apparent that the students' social and behavioural adjustment were not compromised for regular classroom placement and the benefits thus obtained.

In summary, with respect to the issue of academic achievement, strong support for the regular class placement of EMH students was accumulated by researchers in the 1950's through the 1970's. In some studies, few or no differences in achievement were found among students in regular and special class settings (Bradfield et al, 1973; Carroll, 1967; Goldstein et al., 1965; Ainsworth, 1959; Cegalka and Tyler, 1970). In other studies, EMH students placed in regular classrooms evidenced superior academic gains (Cassidy and Stanton, 1959; Thurstone, 1959; Guerin and Szatlocky, 1974). Since special classes had been formed in order to provide handicapped students with better educational opportunities, their continuance, in light of the research evidence, could hardly be justified. Findings of no differences in academic achievement would be sufficient to provoke questions regarding special class placement since these classes were, as they continue to be, expensive to operate and divisive of the school population.

In the area of socio-emotional adjustment, research findings do not clearly support either regular or special classes. Interestingly,

the studies favouring the special class pre-date those favouring the regular class (Cassidy and Stanton, 1959; Goldstein et al., 1965). Perhaps regular educators were becoming increasingly capable of anticipating and meeting their students' socio-emotional needs and this accounts for later findings favouring regular class placement. It can also be noticed that nuances in the aspects of socio-emotional adjustment chosen for observation exist across the studies. In the two studies favouring special classes, the students' degree of isolation was observed. Thus a student who was socializing with other children would not be viewed as isolated. In reality, the special class students may have been interacting with each other and were very isolated from children in regular classes. Concomitantly, if interactions with members of the general school population were observed, the integrated students may have appeared to be less isolated. Carroll (1967) found EMH students, after eight months of half day integration, to have better self-concepts than segregated EMh students. If the integrated students were being rejected socially by their non-handicapped peers, it is difficult to imagine how such a finding could be obtained. Maintenance in regular classrooms seemed to have contributed positively to the students' perceptions of themselves. Guerin and Szatlocky (1974) found that highly integrated EMH students demonstrated behaviour which was more acceptable and less distinguished from their classmates' than did less integrated EMH students. If one of the goals of a special education programme is the acceptance of handicapped children by their peers and society in general, then this finding is of importance to the integration issue. Individuals displaying deviant or unexplainable

behaviours may be deemed unacceptable for association by others. An examination of the findings regarding the socio-emotional adjustment of EMH students reveals that integration is preferable to segregation. Based on the research of the 1950's to 1970's, a strong case was forming in support of integration into regular classes for EMH students.

The Learning Disabled and Emotionally Disturbed

The efficacy of special class placement for LD children was also being questioned during the period up to and including the early 1970's. Sabatino (1971) compared the effectiveness for these children of two different resource room arrangements, and a special class placement with no intervention. All of the 114 students in the study had been identified as LD and had exhibited patterns of delayed achievement in school. The children were assembled into matched cells on the basis of age, sex, IQ, and perceptual impairment. Twelve children were placed in a regular class with no intervention, and another twelve children formed a special class. Thirty students received resource room support for one hour a day in a small group of no more than six children at a time (Plan A). Sixty children attended the resource room for one half hour twice a week in groups no larger than six children (Plan B). Similarity in programmes was a feature of the project. To this end, the teachers planned activities and lessons together, restricted specific types of activities to twenty minutes (although activities could be repeated if needed), and equipped their rooms with the same materials. Also, the special class and Plan B resource teachers switched positions two days a week to further control for

teacher differences. At the end of the school year, the students were evaluated on academic achievement. The control group had made very little progress which seemed to indicate that LD students must have some type of special education support. The Plan B students (1/2 hour, twice per week) had made slightly better progress than the control students, but much less than the Plan A and special class students. The authors stated that while Plan B was better than nothing it did not afford enough service to the LD students. There were no differences in progress between the Plan A and special class students, both groups having made excellent improvements. Sabatino concluded that an hour-long daily placement in a resource room was the preferable arrangement, as it had been demonstrated to be effective in terms of academic outcomes without attaching the stigma of special class placement to the children. These findings seemed to indicate that more children could be served just as effectively in a resource room. This arrangement allowed for contact between the regular and special class teachers, resulting in carry-over into the regular classroom. Similar findings and conclusions were obtained by Shrag (1972).

Vacc (1972) investigated the long-term changes in achievement and overt behaviour of children who had been identified as ED. One group of children in the study had been in a special class but had returned to the regular class for at least two years. The other group had never had special education services. Data were gathered in the form of sociograms in the classrooms in which the subjects were placed. The students were also assessed for academic achievement and behavioural adjustment. The children who had been in special classes displayed

better levels of achievement, but there were no differences between the two groups in overt behaviour or in positive and negative choices on the sociometric questionnaires, which showed the same patterns of stars, isolates and rejectees. Vacc concluded that special class placement for ED students was not supported.

The Move Towards Integration for Handicapped Children

Compounding the issue of special class placement was evidence that once children were placed in these classes, they usually remained there, rarely returning to regular education. Gallagher (1972) cited the cases of a number of large city school systems where fewer than 10% of children placed in special education were ever returned to general education. Gallagher further stated that the labelling for placement purposes does not lead to effective treatment. Rather, especially in the case of mental retardation, the placement process leads to making certain assumptions about the child regarding the progress s/he will make. Frequently, the assumption is made that the student cannot learn or develop faster than at present. This results in impediments for the child. Finally, Gallagher opined that special class placement is often sought as a method of permanently excluding troublesome children from regular education. Combined with the information regarding the ineffectiveness of the special classes, research indicating that placements were terminal made a powerful argument for reexamination of the way services were provided to handicapped students. The addition of allegations of the misuse of special education classes as "dumping grounds" for disliked or problem students could have only strengthened

the resolve of those who were calling for change.

During the era in which the research discussed above was conducted, a strongly worded condemnation of the way in which special classes were being used was published by Dunn (1968). He stated that special classes had been created to deal with "misfits", socioculturally deprived children with mild learning problems, and judged that 60 to 80% of the pupils in classes for the mentally retarded were children from low status backgrounds including those racially/ethnically different from the white middle class. The number of special classes had been growing "by leaps and bounds". Dunn stated that serious educational and civil rights issues were being or should be raised in most cases about their continued existence. Most of the special education classes then current were obsolete and unjustifiable, in Dunn's opinion, and he listed four reasons for changing special education services:

- (1) underprivileged or slow learners can gain a lot from contacts with non-handicapped students without detriment to the latter group. Homogeneous groupings of children with these difficulties compound their disadvantages.
- (2) efficacy studies had not supported special classes as being more advantageous for children with any of a variety of handicapping conditions.
- (3) the labelling process which preceded special class placement was likely to place limitations on the child due to lowered expectations.
- (4) improvements in general education made the accommodation of handicapped children more viable.

In order to realize the goal of special class disbandment, Dunn made several suggestions for the accommodation of students requiring special education support. He recognized the role of special classes for the relatively limited numbers who required them due to severe handicaps. For the rest of the students, Dunn recommended keeping the students in their regular classroom placements for as much of the day as possible. Support could come from a diagnostic-prescriptive clinic, remedial-resource room, itinerant or team teachers, or consultants. The special education teachers formerly in special classes would have to take on new roles in supporting students and their teachers either directly or by developing and prescribing materials and methods for effective learning.

Dunn's article succinctly stated many of the major issues and concerns that special educators were coming to terms with in this era. Increasingly, research studies were producing results which cast serious doubts on current special education practices. Leaders in the field, such as Dunn, were calling for drastic change. In the United States, individuals began to assert their rights in the courts (Wright Decision in the District of Columbia against the use of tracking described in Dunn, 1968).

Birch (1974) included the following factors among those which fostered increased support for the integration of handicapped students.

(1) The development and mass production of special education materials of better quality and in greater volume led to the regular classroom being readily equipped for special students.

(2) Teachers had better opportunities for professional development in the field of special education rendering them more skillful in handling these children.

(3) Parents had been promoting regular class placement for their handicapped children as opposed to special class placement.

(4) Concerns had been raised over the labelling of a child which could occur with special class placement.

(5) The validity of the psychological tests and measurements which had been traditionally used to place children in special programmes had come under question, especially in light of the over-referral to classes for the mentally retarded that had occurred.

(6) Considerations for the socio-emotional development of both handicapped and non-handicapped children had raised doubts about the practice of isolating these two groups from each other.

(7) The effectiveness of traditional special education programmes had been seriously challenged.

(8) The integration of handicapped students in regular classrooms had been recognized as financially attractive as it involved less duplication of staff, materials and school plant costs (Birch, 1974).

These factors led to the legislation of change. In 1975, Public Law 94-142 was passed in the United States guaranteeing that all handicapped students would receive services and strongly supporting mainstreaming. In Canada, Manitoba's now defunct Bill 58 was passed but not proclaimed. It also guaranteed services to handicapped students. Other provinces followed with revisions to their special education policies. Educators in the United States and Canada were

faced with the task of implementing laws, policies and guidelines whose common goal was the reduction in the use of special education classes, and the integration of handicapped students into the regular classroom. Educators began to look to recent models of special education services in order to carry out this task.

Models for Revising Special Education Service

One of the first widely known models describing alternate ways of serving handicapped children was that developed by Maynard C. Reynolds (1962). In this framework there were a number of options for placement, and recognition was given to the variety of individual needs encountered among handicapped children. The regular classroom option was available in four different forms -- the regular classroom alone, regular classroom with consultation services for the teacher, regular classroom with some direct services for the child, or the regular classroom with ongoing daily support to the child from a resource teacher. More intense levels of service were provided for in the model by part-time special classes, full-time special classes, special day schools, residential schools, hospital schools, and the most intensive level of hospital or treatment centre placement. An important feature considered in the Reynolds model was the changing nature of children's educational needs. Placement was to be made as close to the regular classroom as possible with efforts being geared toward moving children into progressively less intensive environments as quickly as possible. Hence, placements could be regarded as temporary, resulting in a better recognition of individual children's characteristics and educa-

tional gains and avoiding the documented practices of terminal placements as described by Gallagher (1972).

A model very similar to the Reynolds model was that proposed by Evelyn Deno (1970). The Deno model incorporated the identical services and a similar gradation of services by intensity as did the Reynolds model. The distinguishing feature of the Deno model was that it entailed a visual representation of the numbers of children one should expect to find receiving given services. Large numbers of handicapped children should be served in the regular classroom, with support services if needed, while relatively few should be placed in homebound instruction services. Here was a direct indication that most handicapped children should be served in the regular classroom, with support services as required. Placement recommendations were to be made with due consideration to each individual's unique learning needs, but there was no justification in the Deno model for placing large percentages of the handicapped population in the more intensive environments.

The development of models such as the Reynolds and Deno contributions, facilitated the planning and implementation of regular class placement for handicapped children. The guidelines provided, enabled educators to consider more fully the appropriate placements for educationally handicapped children.

Summary of the Rationale for Integrating Handicapped Students

During the 1950's to 1970's, research was accumulating which demonstrated that special class placement would not necessarily be to the benefit of handicapped children. A great deal of attention

was directed toward EMH students, with some consideration given to the LD and ED students. Generally, it was found that special class placement did not give a student advantages either academically or socio-emotionally. Another factor which further supported the reduction in use of special classes, was the effect of labelling. Once labelled, students could not seem to gain exit from special classes. The process of assigning children to special classes was highly criticized by a number of leading figures in Special Education. Special classes had become dumping groups for socio-culturally deprived children and troublesome children. Recommendations for change were made, all of which would result in a drastic reduction in the number of special classes and the maintenance of most handicapped children in regular classrooms. Due to major developments in the educational, societal and legal domains the recommendations for change were seen as feasible. In the mid-seventies, laws and policies were adopted in Canada and the United States which formalized support for integration as the preferred method of serving handicapped students. Two models of providing special education services came into widespread use, the Reynolds model and Deno model. Both models supported some regular class integration for most handicapped students and saw students moving out of service-intensive levels of the model, and closer to the regular classroom. Thus, the period leading up to the early 1970's saw the questioning of old practices in Special Education and the proposal and the development of new ones. The task of implementing the changes fell to the Special Educators in the field. As these people began their work, they undoubtedly encountered a number of difficulties in achieving their

goals. In the next section, consideration is given to one of the potential areas of difficulty in implementing integration.

TEACHER ATTITUDES TOWARD INTEGRATION

In this section teacher attitudes toward the concept of integration are discussed. Because principals were often included with teachers in studies of attitudes toward integration, some attention is directed toward the attitudes of administrators. The research reported in this section included teachers at a number of different grade levels in both elementary and high schools, as well as teachers in a number of area specialities. This research also included regular and special education teachers.

As administrators have begun implementing programmes whose expected outcome is the integration of handicapped children into regular programmes, they will have been required to consider numerous factors which could impede or facilitate success. One critical intervening variable is the attitudes of those professionals who will be expected to work directly with handicapped children in the integration process. The acceptance or non-acceptance of the principle of mainstreaming by teachers would seem to be a factor which could effect the implementation process.

The Concept of "Attitude"

Allport (1935) defined an attitude as "a mental or neural state of readiness, organized through experience, (which exerts) a directive or dynamic influence upon the individual's responses to all objects

and situations with which it is related" (p. 17). Osgood, Succi and Tannenbaum (1957) stated that an attitude is a cluster of perceptions which are directed toward a particular construct, and that an attitude predisposes an individual to behave in a particular manner toward a given construct.

In both of these definitions, attitudes are conceived as having a direct influence on an individual's behaviour. Both definitions refer to the formative properties of past experience, and by extension, lack of experience, in attitudinal development. Concomitantly, the attitudes a teacher holds concerning a construct like the integration of handicapped children into the regular classroom could exert both subtle and more overt influences on that person's behaviour.

Importance of Teacher Attitudes

There is agreement in the literature that teacher attitudes toward mainstreaming are critical. Postman and Weingartner (1969) stated, "There can be no significant innovation in education that does not have at its centre the attitudes of teachers, and it is an illusion to think otherwise" (p. 33). Kaufman, Gottlieb, Agard, and Kukic (1975) said that successful mainstreaming is dependent on teacher willingness to modify instructional strategies for the handicapped child. Teacher willingness is in turn, dependent on a favourable attitude toward mainstreaming. Grosenick (1971) considered the extent to which mildly handicapped children can be integrated to be contingent on teacher willingness to accept these students. Childs (1975) and Hewett (1974) both considered teacher attitudes to have direct

relevance for the success they will have in dealing with handicapped children in their classrooms. Dunn (1973) believed that teacher attitudes must be changed and improved before more children with unusual learning characteristics can be accepted into the educational mainstream. Dunn further stated that negative teacher attitudes can be conveyed to their other students resulting in the ostracism and even rejection of the exceptional child in the school. Such widespread recognition of the importance of teacher attitudes in the implementation of integration has led to the generation of a number of studies in the field.

Research on Attitudes Toward Integration

Exploration of teacher attitudes toward the integration of handicapped children into the regular classroom has yielded mixed results. Stephens and Braun (1980) surveyed kindergarten to grade eight teachers across ten school districts to determine whether they would be willing to integrate handicapped children into their classrooms. The study yielded a sample of 795 teachers, 61% of whom indicated they would be willing to integrate a special needs child and 39% of whom indicated they would not be willing to do so. Dyson and Kubo (1980) surveyed 46 professionals employed in a regular pre-school programme regarding their receptivity toward integrating handicapped children. The majority of the teachers reported being in favour of integration with support services available to the child. Ward et al (1978) reported that a survey of 1,292 Australian school principals indicated these administrators to have generally positive attitudes toward the main-

streaming of gifted, mildly retarded and sensory handicapped students. The preferred method of service delivery was regular classroom placement with removal for specialized support services. Johnson (1976) surveyed 250 kindergarten to grade twelve teachers and found that 67% felt educationally handicapped students should spend part of the day in the regular class. Mark (1980) found 610 regular education elementary teachers to have generally a positive attitude toward mainstreaming.

Hughes (1978b) surveyed 101 principals and 568 occupational education teachers in North Carolina to determine their attitudes toward the inclusion of handicapped students in occupational education courses. Findings indicated that the principals and teachers held similar attitudes toward mainstreaming. While the concept of mainstreaming was not rejected by these educators, neither was there a high level of acceptance for it. Feitler and Dubasik (1978) indicated that while their sample of 129 regular classroom teachers were receptive to the integration of educable mentally retarded (EMR) children into the regular classroom, these teachers qualified acceptance of EMR students into their classrooms by indicating that the students should be able to perform the academic work. Vacc and Kirst (1977) sampled 102 regular classroom teachers to determine their attitudes toward integrating emotionally disturbed students and found these teachers to prefer the segregated classroom as the best placement for these children. These teachers felt that emotionally disturbed children would achieve greater academic gains in a special class, that they would not be accepted by their non-handicapped peers, that contact with emotionally disturbed children would not be beneficial

to the other children, and that the regular classroom teacher was not equipped to adequately serve the emotionally disturbed child. Similarly, Hudson (1979) concluded on the basis of his survey of regular classroom teachers that unfavourable attitudes toward mainstreaming are found among this group. The teachers indicated that they did not have the time, the skills nor the support they needed in order to implement an integration strategy. Ingram (1976) reported similar findings.

Teacher Attitudes Toward Types of Handicap

Researchers have found differing levels of acceptance by teachers depending on which particular group of handicapped children is being considered. Williams (1977) surveyed 257 regular classroom teachers to determine their attitudes toward integrating a variety of handicapped children. The most accepted through to least accepted were as follows: physically disabled, socio-emotionally maladjusted, learning disabled, and educable mentally retarded. These findings were in agreement with those obtained by Hirshoren and Burton (1979). Sixty-seven classroom teachers from Georgia participated in the study concerning placements for handicapped students. The least accepted group was the mentally retarded, with teachers being more willing to accept the behaviourally and physically handicapped. Guerin (1979) also found teachers to be least comfortable with the retarded when compared to other educational handicaps. Descriptions of hypothetical EMH, LD, and normal ten-year-old males were used by Moore and Fine (1978) to ascertain teacher attitudes toward mainstreaming. The sample included regular and special education teachers. Integration of the LD student was supported

to a greater degree than the integration of the EMH child. Williams and Algozzine (1979) also found EMH students to be least acceptable and the physically handicapped most acceptable to a group of 267 Pennsylvania teachers. The ED child was also not accepted, but the LD child was. In summary, researchers have consistently found physically handicapped children to be more favoured by classroom teachers and retarded children least favoured. Variable results have been obtained when emotionally disturbed and LD children are considered.

Discussion of Research Concerning Teacher Attitudes Toward Integration

With such a variety of findings in studies which have attempted to describe teacher attitudes toward mainstreaming, it is not possible to make a generalized statement concerning the level of acceptance of this method of service delivery. A number of factors relevant to the formation of attitudes toward integration are likely operating in different situations. The level of implementation of integration at the time of survey could affect teacher expressed attitudes. A variety of administrative and professional climates could exert an influence on survey outcomes. A number of sociological factors could influence results. Therefore, the results obtained in one situation cannot be applied directly to another. Thus, surveys to determine educators' attitudes toward integration have procued a wide variety of results, and with no findings from one situation necessarily directly applicable to another.

THE RELATIONSHIP OF DEMOGRAPHIC CHARACTERISTICS
TO TEACHER ATTITUDES TOWARD INTEGRATION

As stated above, attitudes are formed upon a base of the past experiences that an individual has accumulated. It would be useful for those responsible for integrating handicapped children to know which factors are related to positive or negative attitudes toward the concept. Attention has been directed toward a variety of demographic teacher variables in order to gain understanding of which ones are relevant to attitudes toward integration.

Years of Teaching Experience

A number of studies, limiting their subjects to regular classroom teachers, found that there is no relationship between years of teaching experience and attitude toward integration. Enoch (1979) surveyed 325 regular classroom teachers in Tennessee. She found that the number of years an individual had been teaching was unrelated to acceptance of integration. Hughes (1978b) surveyed vocational teachers for their attitudes toward handicapped individuals and their integration into the regular classroom. He found teacher attitudes to be unrelated to years of teaching experience, but negatively related to a traditionalistic educational orientation.

Kendall (1979) surveyed regular elementary classroom teachers in Detroit and found no significant relationship between attitudes toward mainstreaming and years of teaching experience. Kendall found that most of the teachers contacted would not have objections to having a handicapped child in their classrooms.

Rivera-Valentin (1978) contacted 124 teachers in Puerto Rico regarding their attitudes toward integrating EMH students. Half of the teachers taught in schools with special classes for EMH students while the rest taught in schools having no special classes. Thus the second group had no contact with handicapped children on a daily basis. Rivera-Valentin found no significant relationship between years of teaching experience and attitude toward integration.

Other researchers used mixed samples of regular and special class teachers to investigate the effects of years of teaching experience. Peters (1978) used a sample of 79 classroom teachers and 43 resource teachers from 43 elementary schools to investigate the effects of a variety of variables and their relationship to teacher attitudes toward integration. Using The Classroom Integration Inventory and The General Information Inventory, both by Haring, Stern and Cruikshank and a Personal Data Questionnaire formulated for the study by the researcher, he found no significant relationship between the amount of teacher experience and attitude toward integration.

Greene (1976) surveyed 115 regular and special education teachers regarding their acceptance of integration. He found there was no relationship between the number of years a teacher has been teaching and the attitudes held regarding the innovation.

Sigler and Lazar (1976) used a sample of 139 regular and special education teachers in their study. There was no relationship found between years of teaching experience and attitude toward integration.

Clapp (1979) investigated the attitudes of pre-school teachers toward integration. She contacted 79 teachers who were employed in

pre-school/childcare centres in five different cities. Clapp classified the centres into three different categories according to their philosophies and method of operation and found that the teachers in the three groups had had the same amount of experience with handicapped children and were the same on training and education variables. For these three groups, the number of years teachers had taught was not found to be related to their attitudes toward integrating handicapped children.

Buletza (1979) used a sample of 115 student teachers and 245 certified teachers from Michigan to study attitudes toward integration. The sample included both general and special educators. Results indicated that while the subjects expressed a positive attitude overall, as their years of experience increased, their attitudes became less positive. This relationship was found with both general and special educators.

Similar results were reported by Mandell and Strain (1978). The total sample size was 216 educators, composed of 90 regular classroom teachers, 50 principals and 51 special education teachers. Mandell and Strain (1978) found that there was a negative correlation between years of teaching experience and acceptance of mainstreaming. Similar results were reported by Pecheone and Gable (1978) and Robinson (1977).

In summary, two major findings have emerged from the research regarding the relationship of teacher attitudes toward integration and years of teaching experience. Either years of experience have been unrelated to attitude or they have been negatively correlated.

Contact with Handicapped Children

Professional contact with handicapped children has been consistently related to a positive attitude to integration. Mandell and Strain (1978), described above, found with a mixed sample of regular class teachers and principals, that previous special education experience was related to a positive attitude toward integration.

Moore and Fine (1978) contacted three groups of elementary teachers in suburban areas. EMH, LD and regular class teachers yielding a total sample size of 61 (18 EMH, 21LD, 22 regular class). The Leary Interpersonal Check List, which has 128 items, was administered. The respondents were asked to check those phrases which described each of three hypothetical children (LD, EMH, and "normal"). They also completed a 15 item multiple choice questionnaire on mainstreaming. Results indicated that the EMH and LD teachers were much more supportive of integrating the hypothetical handicapped children than were the regular teachers.

Alexander and Strain (1978) also conducted an extensive review of studies that investigated educators' attitudes toward handicapped children. They concluded that those teachers who have little experience in special education tend to be unacceptant of integration. Moreover, these teachers tend to view handicapped children as generally less able to profit from an education.

Pratt (1978) followed a staff as integration was being introduced in their school. Nineteen teachers formed the experimental group, while a group of 480 teachers from other schools were used for comparison purposes. At the end of the year, the staff at the experimental school

had more positive attitudes toward integration and toward handicapped persons in general than the comparison group. Pratt concluded that contact with handicapped children as well as increased knowledge had led to the development of more positive attitudes.

Hughes (1978c) surveyed vocational teachers regarding their acceptance of handicapped students into the regular classroom. He found a positive relationship between previous experience with handicapped students and a willingness to integrate them.

Rumble (1978) also sampled vocational teachers. There were 120 teachers in the study, each completing a questionnaire on attitudes toward integrating handicapped students into vocational programmes. A strong positive relationship was found between previous experience with the handicapped and degree of comfort with integration.

Williams (1977) surveyed 257 regular classroom teachers to ascertain their attitudes toward the regular classroom integration of handicapped children. Four types of handicaps were under consideration: the physically handicapped, socially/emotionally maladjusted, LD and EMH. It was found that teachers who had had a high degree of contact with handicapped children showed a greater willingness to integrate mildly handicapped students into regular pre-school programmes. The majority of the teachers were in favour of integration with support services. Differences in attitude were found to be related to experience in working with handicapped children. Those teachers with more experience in this area were more willing to integrate handicapped children.

Clark (1976) monitored a pre-school which had begun integrating handicapped children. Three children were placed in each class of 16. The teachers had no special education background. Clark found that the teachers reorganized the school into family groupings and set about learning new competencies. The greatest changes in attitude came in the first year but changes continued to occur over the next three years as well. At the end of the four year period, Clark found the teachers to be very committed to exceptional children.

Siperstein and Gottlieb (1978) surveyed 74 women attending a workshop on special needs children. The women were all either the parent or teacher of an EMH child. These women supported integration for EMH students, but not for the severely mentally handicapped. In only a few cases, the amount of experience a teacher has acquired with handicapped children has been unrelated to attitude toward integration. Kendall (1979), in surveying regular class teachers, found that there was no relationship between the number of handicapped students the teachers reported having had integrated into their classrooms during their careers and their attitudes. The majority of the teachers in the study were acceptant of integration.

Jordan and Proctor (1969) surveyed a variety of teacher groups and found that the special education teachers in the study had attitudes toward integration similar to those of the rest of the teachers. The conclusion put forward in the study was that experience working with exceptional children does not lead to a more positive attitude toward integration.

In summary, the relationship of teacher contact with exceptional children and attitude toward integration has been extensively investigated. Generally, contact with exceptional children seems to predispose teachers to be more acceptant of integration. However, no relationship has been found between these two factors in some studies.

Teacher Age

A number of researchers have investigated teacher age as a possible influence on attitude. In a variety of settings and grade levels from pre-school to twelve, teacher age has been unrelated to expressed attitudes toward mainstreaming. Pietroski (1979) contacted 153 Kindergarten to grade 12 teachers ranging in age from 22 to 60 years, regarding their attitudes toward integration. Results indicated that age had a minimal to negligible influence on attitudes.

Ingram (1976) had a sample size of 551 subjects which included both regular classroom teachers and special education supervisors. There were no differences among the regular teachers in attitude as it was related to teacher age. The regular teachers were generally found to be unaccepting of integration.

A number of other studies previously reviewed found no relationship between teacher age and attitude and will be discussed briefly. Clapp (1979) found attitudes unrelated to age in pre-school teachers. Kendall (1979), Kulbeida (1972), and Rivera-Valentin (1978), found attitudes toward integration unrelated to age in elementary teachers. Sigler and Lazar (1976) found age was not related to acceptance of integration in a mixed sample of regular and special education teachers. Hughes (1978c)

found age was not related to acceptance of integration in a mixed sample of regular and special education teachers. In addition, Hughes (1978c) did not find any relationship between age and attitude toward integration in a sample of 101 principals and 568 vocational teachers.

In summary, teacher age and its relationship to attitude toward integration has been investigated under a number of conditions. Consistently, researchers have found that teacher age has no predictive value for teacher attitudes in this area.

Sex of Teacher

The sex of a teacher has also been studied in connection with teacher attitudes toward integration. Most researchers have found that sex does not predict teacher attitudes in this area. The studies quoted in this section have been discussed above and will be presented briefly here. Clapp (1979) found the sex of a teacher unrelated to attitude in a sample of pre-school teachers. Conine (1968), Ingram (1976), Kendall (1979), and Kulbeida (1972) found sex of the teacher was not related to attitude in their samples of elementary teachers. Pietroski (1979) sampled K-12 teachers and found sex not related to attitude. Greene (1976) and Sigler and Lazar (1976) found similar results with mixed samples of regular and special education teachers. Hughes (1978c) also found sex unrelated to attitude in vocational teachers.

Penn (1972) did not support the general findings above. In studying the attitudes of elementary school administrators and teachers, Penn

found male teachers to have a more favourable attitude toward integration than female teachers.

In summary, the sex of a teacher has generally been found to have little or no predictive value for attitude toward integration. Where a relationship was found, males seemed to have more favourable attitudes.

Special Education Training

The effects of previous training in special education is a self-evidently important area of study in attitude formation. A significant correlation between the number of special education courses taken and a positive attitude toward integration has been established in a number of studies. All of these studies have been reviewed above and will be presented briefly here. Enoch (1979) and Robinson (1977) found that regular classroom elementary teachers who had taken special education courses had a more favourable attitude toward integration. Robinson found the same relationship for special education inservice. Stephens and Braun (1980) found that those K-8 teachers who had taken special education courses were more willing to integrate handicapped children. Pietroski (1979) found similar results with a sample of K-12 teachers. Mandell and Strain (1978) found the number of courses taken in diagnosing learning and behaviour problems related to willingness to integrate handicapped students.

Allen (1978) used the Rucker Gable Educational Programming Scale (1974) to investigate the attitudes of 287 preservice teachers. Allen found that the student teachers in regular education were more favourably disposed to integration than were the students in special education.

This finding contradicts the general consensus that exposure to special education courses leads to a more positive attitude toward integration.

In summary, special education training, either through courses or inservices, seems to promote a more favourable attitude toward integration. The one study which found contradictory results was one in which student teachers were used as subjects. It could be argued that an experience factor might have been operating in the other studies. The combination of special education training and experience may have helped teachers to become more acceptant of special students.

Level of Teacher Training

Consistent findings have not been reported by researchers seeking a possible relationship between level of training and attitude toward integration. Some studies indicated there was no relationship between these two factors. The studies cited here have been reviewed above and will be presented briefly. Kendall (1979), Kulbeida (1972) and Rivera-Valentin (1978) found no relationship between level of training and attitude in elementary teachers. Pietroski (1979) obtained similar findings with a mixed sample of regular and special education K-12 teachers some of whom held master's degrees and some, bachelor's degrees. Hughes (1978) corroborated these findings with a sample of vocational teachers.

Where there has been a significant relationship found, increased years of training have been related to a more positive attitude. Lake (1978) surveyed 110 middle school educators with the Rucker-Gable Educational Programming Scale (Rucker and Gable, 1974). She found that

the subjects were willing to accept the mildly handicapped into the regular classroom. There was a positive relationship between attitude and years of training. Robinson (1977) found a similar relationship in elementary teachers as did Peters (1978) with a mixed sample of regular and special class teachers. Smart, Wilton and Keeling (1980) examined the attitudes of 32 regular class teachers. Half of the teachers had referred a student to a special class. The other teachers had children of comparable age and ability, but had retained them. The "non-referring" teachers as a group had better educational qualifications than the other teachers.

In summary, mixed results have been found when the relationship between attitude toward integration and level of teacher training has been investigated. In some cases, no relationship has been found. In others, a positive correlation has been obtained.

Grade Level Taught

Some researchers have looked at the grade level at which a teacher works to see if it is related to attitude. Larrivee and Cook (1979) surveyed 941 regular classroom, k-12 teachers. The teachers were from urban, suburban and rural areas. About two-thirds of the sample were elementary teachers. Larrivee and Cook found a negative relationship between grade level taught and acceptance of integration. The junior high level teachers, however, expressed the most negative attitudes. Stephens and Braun (1980), reviewed above, found elementary teachers to have more positive attitudes toward integration than grade seven and eight teachers. Grade level was unrelated to attitude in the research

conducted by Kulbeida (1972) and Sigler and Lazar (1976), reviewed above.

Other Demographic Variables

A variety of other factors have received minimal attention as possible predictors of attitudes in this area. Some of the factors which were found to have a non-significant relationship to attitude are self-image and locus of control (Sigler and Lazar, 1976), religion (Conine, 1968), socio-economic status (Penn, 1972), and number of schools in which a teacher has taught (Kulbeida, 1972). Racial/ethnic background was found to be related to attitude in one study (Penn, 1972) and unrelated in two others (Clapp, 1979; Kulbeida, 1972). Marital and parental status have been found unrelated to attitude by Clapp (1979) and Kulbeida (1972). However, Smart, Wilton and Keeling (1980) found teachers who did not refer students to special education services were more often married. Robinson (1977) found a significant relationship between attitude and the number of inservices attended in the area of exceptional children, Kendall (1979) did not.

Demographic Variables Requiring More Research

A number of demographic variables are worth further investigations. Inconclusive results have been obtained from investigations of the relationship between attitude and the variables of years of teaching experience, level of training, and grade level taught. Knowledge of the possible relationship of these three variables to teacher

attitude is of great importance since the plans for integration of handicapped children could be vastly different depending on the influence of the variables. For example, if primary level teachers were found to be more accepting of integration, then handicapped children would likely be integrated early in their school careers. However, if primary level teachers were found to oppose integration, then handicapped children might be kept in a more protected environment until they reached the intermediate level. The amount of training in special education has been found to be positively related to attitude among preservice teachers. Further investigation with both preservice and inservice teachers is warranted. The sex and age of respondents has generally been marginally related or unrelated to attitude. Further study will confirm the relationship and will be useful for population description purposes. Therefore, there are a number of demographic variables which require more research.

Thus, while some demographic characteristics may have predictive value for attitudes toward mainstreaming, the related research done to date has not produced enough information upon which to form generalizations. There exists a great need for more study in the area.

Canadian Research Investigating Teacher Attitude Toward Integration

There has been a dearth of research into the area of teacher attitudes toward integration on the Canadian scene. Because results from American studies conducted in various areas of the United States cannot be safely applied to Canadian situations, Canadian decision-makers are left with little assistance when they require information concerning teacher attitudes toward integration.

Three studies could be found which conducted research investigating Canadian educators' attitudes toward the integration of handicapped children into regular classrooms. McCauley and Morris (1978) assessed the attitudes of 387 regular classroom teachers as well as 29 administrators, 11 guidance counsellors and 59 special education teachers in Winnipeg, Manitoba. The subjects represented 18 elementary schools, five secondary schools and one special school all in Winnipeg School Division #1, Area 2. The total of 486 subjects represented 77% of the staff in the Area. The instrumentation used was the Rucker-Gable Educational Programming Scale (Rucker and Gable, 1974). The study was mainly directed at comparing the Winnipeg results with the responses Rucker-Gable Associates Ltd. had collected from a selected group of thirty-five American experts in the field of special education. McCauley and Morris found that the elementary teachers had significantly more positive attitudes toward integrating handicapped children than either the American experts or the secondary teachers. The secondary teachers were found to have significantly more negative attitudes than the experts on some subscores. The guidance counselors, and special education teachers did not differ significantly from the experts. Sixteen or two-thirds of the schools participating had mean attitudes that were more positive than the experts' mean attitude. It should be noted that elementary schools were represented proportionately more often among these sixteen schools than secondary schools. Years of teaching experience seemed related to attitudes in that less experienced teachers (under ten years) had more positive attitudes on some subscores relative to the experts than those with over 11 years of experience.

There was also a trend for attitudes to become less positive with increased years of teaching experience. There were no differences between special education teachers and the experts when the former were grouped by years of experience. Also, there were no differences based on the sex of the respondents. Overall, McCauley and Morris found the Winnipeg educators to have a positive attitude toward mainstreaming.

A group of elementary regular class teachers and administrators in St. James-Assinboia School Division #2 in Winnipeg, Manitoba were surveyed by Elliot (1980). The purpose of the study was to determine if the subjects would respond differently to two versions of the RGEPS. The unaltered RGEPS and an edition which included the labels of 'mentally retarded', 'learning disabled' or 'emotionally disturbed' in the behavioural descriptions were used. The results from the group of teachers using the unaltered RGEPS are of relevance to this thesis. The group consisted of approximately 50 regular elementary educators in a suburban setting. Their mean weighted attitude score was 124.71. A weighted total attitude score on the RGEPS of 121 indicates a placement in the regular classroom with resource room support services. Higher scores indicate a less restrictive placement. Hence, these teachers were generally in favour of integration for handicapped students.

Rose (1978) surveyed the attitudes of regular elementary teachers from two schools in Kamloops, British Columbia toward the integration of trainable mentally retarded (TMR) students. Each school was a site for a satellite class for TMR students from a special school. The

primary TMR class for three years at the time of the study. The teachers were very supportive of integration for TMR children. Seventy-five percent of the teachers felt that the TMR children were not the exclusive responsibility of their own teachers and aides and should not be totally isolated in their own classrooms. Eighty-three percent felt that normal students benefit from contact with the TMR and 76% felt that the TMR benefit from contact with normal children. Part-time placement in regular grades was seen as beneficial to the TMR by 83% of the teachers. Concerning the regular teachers' ability to handle TMR students, 95% of the teachers responded that special training was needed to teach these children, and 50% felt they needed special guidance in order to adequately serve retarded children.

Due to the fact that only about three research studies investigating teacher attitudes toward integration have been conducted on the Canadian scene, there is a great need for further study of Canadian educators' attitudes since they are faced with the implementation of integration. The work that has been done has laid a foundation to which further studies can add information leading to a description of teacher attitudes. Demographic characteristics have had little attention in the research cited and is an area needing further investigation in the Canadian context. Finally, data should be gathered from more than one site due to the expected differing levels of use and familiarity with integration.

Summary of the Chapter

During the late 1950's up to the early 1970's, research conducted into the efficacy of special classes prompted educators to question seriously many of the current special education practices. The calls for change resulted in a revision and restructuring of special education services in Canada and the United States. A commitment emerged among educators to try to keep handicapped children in the regular classroom as much as possible, while providing appropriate support services. Having made this initial thrust for change, educators must monitor and research this process of integration. One area of major concern is that of teachers' attitudes toward the innovation, since the ultimate act of implementation rests with them. Research in the past has found varied results when examining teacher attitudes in this area. Some demographic variables seem to be related to teacher attitude. Among these are years of teaching experience, experience with handicapped children, age, sex, special education training in the form of courses or inservices, level of university education and grade level taught. Others have received minimal attention. Often contradictory results have been obtained in the research studies investigating demographic variables and attitude. On the Canadian scene, there has been a lack of research in this area. Clearly, teacher attitudes toward integration presents a useful and fruitful area of research.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

In Chapter III the writer presented the background of the research plan and described the procedures followed in the study. Included were descriptions of the sample selection process, the target population, the method of data collection and data analysis procedures, and a review of the instrumentation.

The Population

The study was limited to teachers of the elementary grades. The study of teacher attitudes at this level was considered most useful for two reasons. Integration might be more feasible for some handicapped children during the elementary years because there is less discrepancy between their functional levels and that of the regular education children. As the children become older, the discrepancies become greater. Therefore, elementary grade teachers will likely be called upon to integrate handicapped children more frequently than teachers of more advanced academic levels. Secondly, the first contacts a young handicapped child has when entering the school system are with elementary level teachers. The level of acceptance by the teacher that the child experiences could have repercussions throughout his/her school career, in terms of both academic progress and affective growth. Therefore, it seemed most useful to examine the attitudes of elementary level teachers.

Preservice teachers were included in the study as well as inservice teachers. This allowed an analysis of the attitudes that student teachers possess when they enter the field. The full range of teaching experience possible in the profession was thus represented, giving the opportunity to judge whether working in the field is a potential variable in attitude formation. The preservice teachers were enrolled in elementary education programmes and were all in their final year of study before certification.

The decision was made to select the sample of practicing teachers from rural areas because previous Canadian studies, while few in number, have been conducted with urban populations. Selecting a rural sample broadened the information available concerning teacher attitudes and gave the opportunity for comparisons to the urban populations previously used.

A cross province sample of inservice and preservice teachers was selected. Since some provincial ministries of education have advocated integration for longer periods of time than others, teachers in various provinces were expected to be operating at differing levels of familiarity with the strategy.

The Sample

The participants in the study were residents of two provinces: Manitoba and Ontario. From each province a sample of 50 preservice teachers and 50 inservice teachers was selected, yielding a total of 200 subjects. Demographic data were collected from the respondents using a questionnaire prepared by the writer. The results are presented in Table 1.

TABLE 1
Demographic Characteristics of the Sample

Variable	Frequency
Grade Level Taught	
K-3	54
4-6	48
Student Teachers	98
Sex	
Male	42
Female	158
Age	
20-29	134
30-39	44
40-49	10
50-59	12
Highest Degree Earned	
Certificate	26
Bachelors	169
Masters	5
Years of Teaching Experience	
0	97
1-4	31
5-11	38
12 or more	34
Number of Special Education Courses Taken	
0	111
1 or more	89
Number of Inservice Days in Special Education Taken	
0	167
1 or more	33

The preservice teachers were all in their final year of study before certification in elementary education. The students selected had entered a one-year teacher training programme subsequent to obtaining a Bachelor's degree in another field of study. Hence, the students came from a variety of academic backgrounds. The samples in both provinces included students with general degrees and honours degrees. The students were all enrolled in "faculty-based" programmes. Their student teaching experiences were arranged into blocks of time and they received instruction at the University during the rest of the academic year. The pattern of student teaching blocks at the University in Ontario was as follows:

first term - 2 two-week blocks

second term - 1 five-week block

Thus, the programme entailed nine weeks of student teaching. The pattern of student teaching at the University in Manitoba was as follows:

first term - 1 four-week block

second term - 1 five-week block

The Manitoba programme also required nine weeks of student teaching. At the time of sampling, early February, the students in both groups had completed only their first term student teaching. Hence, all the preservice teachers had experienced four weeks of student teaching, although in slightly different patterns. In general, the student teacher groups appeared to be similar with respect to their characteristics and academic programmes.

The in-service teachers were all teaching regular education classes at the Kindergarten to Grade Six levels. Special Education teachers and school administrators were not included. Both full-time and part-time teachers participated in the study. The inservice teachers were selected from rural agricultural areas. The communities in which the schools were located did not exceed a population of 1400 people. These communities existed mainly as service centres for the surrounding areas. In the two locations, most of the farming enterprises were mixed, having both livestock and cash crops of grains. The communities themselves were on average about 100 kilometres from a major urban centre. In both samples, Manitoba and Ontario, there were schools where mixed or split grade classes occurred. This arrangement was usually employed to accommodate small class sizes, resulting in classrooms with numbers of students at or over an administratively determined minimum level. These classrooms contained two and occasionally three grade levels. Additionally, the teachers in all the schools had similar opportunities for contact with Special Education personnel and programmes through their local system's Special Education Co-ordinator, Resource teachers and Special Class teachers. Based on the similarities in the two teacher samples, it is assumed that comparisons between them are valid.

Methodology

The format of an exploratory investigation was adopted for the research study described in this thesis. Exploratory investigations are appropriate and desirable in situations where three conditions exist.

First, previous research has contributed one or both of the following types of data:

1. a background of observational data, and
2. data concerning variables about whose relative relevance little is known.

Second, there is little usable theory available in the area. Third, the research concerns a relatively broad area (De Groot, 1969).

The three conditions described above apply to this study. As described in Chapter II of this thesis, a wealth of observational data has been collected regarding teacher attitudes toward the integration of handicapped children into the regular classroom. Data has also been accumulated regarding a number of variables, but their relative relevance is not established. Theory exists in the area of attitudes and attitude formation, but none specifically dealing with attitudes of teachers toward integration. Tenuous applications from the general body of attitude theory to the field of education are not of utility. The research reported in this thesis was concerned with a relatively broad area in that it sought to explore the attitudes of a heterogeneous group of elementary teachers toward a variety of handicapping conditions and severity of handicap. The three conditions specified by De Groot were fulfilled by this research.

The purpose of exploratory research is, "the articulation or elaboration of a theory or of isolated hypotheses" (De Groot, 1969, p. 307). The aim of this thesis was to explore the field of teacher attitude concerning integration. Following this exploration, it will be possible to formulate isolated, testable hypotheses upon which

further research can be based. Thus the groundwork will be laid for strictly empirical investigations and consequent theory-building in the area.

Due to the exploratory nature of the research, hypotheses were not stated as such, but rather research questions were posed. Concerning this feature, De Groot (1969) stated:

Exploratory investigations differ from hypothesis testing in that the canon of the inductive method of testing is not observed, at least not in its rigid form. The researcher does take as his starting-point certain expectations, a more or less vague theoretical framework; he is indeed out to find certain kinds of relationships in his data, but these have not been antecedently formulated in the form of precisely stated (testable) hypotheses. (p. 306)

In summary, the format for an exploratory investigation was chosen for the research purposes of the thesis. The three conditions necessary for application of this approach, as specified by De Groot (1969), were met. Due to the exploratory nature of the research, the study was guided by questions rather than hypotheses.

Method of Data Collection

Permission was obtained to conduct the research from the board/division superintendents in the sample. Data from the inservice teachers were collected by the board/division Special Education Co-ordinators in each area. The Special Education Co-ordinators distributed the required materials and questionnaires to the teachers and provided instructions to them as specified in the Rucker Gable Educational Programming Scale (RGEPS) administration manual. The respondents completed the questionnaires at their leisure within a two

week period. At the end of two weeks, the Special Education Co-ordinators collected all the materials and forwarded them to the researcher.

Data from the preservice teachers were collected by the professors of classes in which the students were enrolled. The preservice teachers were given the materials they required to complete the questionnaires during class time and were allowed to take as much time as they required to finish. The instructions were provided by the professors as specified in the RGEPS manual. The student teacher responses were gathered during the same two week period in which the inservice teacher data was collected.

All respondents in the four groups participated on a voluntary basis. Anonymity was guaranteed, both as individuals and as groups, so that subjects could respond freely. The instructions to the subjects were provided orally by the contact persons and also in written format with the instruments themselves.

Sixty-five questionnaires were distributed to each group to ensure that at least 50 usable responses could be collected from each of the four sub-samples. Incomplete questionnaires were discarded. A table of random numbers was used to select 50 questionnaires from the usable returns for each group.

Instrumentation

Teacher attitudes were assessed using the Rucker Gable Educational Programming Scale (RGEPS, Rucker and Gable, 1973). The RGEPS is a 30 item questionnaire (see Appendix 1) which measures teacher attitudes toward three categories of handicap, (emotionally disturbed, mentally

retarded, and learning disabled), at three levels, (mild, moderate, and severe). Scores are obtained for each of the six sub-groupings as well as a seventh Total Attitude score. Teachers are presented with a behavioural description of a child in each item and are asked to select, from seven placement options, the one which they consider most appropriate for each case. The options range from the least intensive "regular class placement with no basic change in teaching procedures" to the most intensive "not for public education - placement in a residential school, hospital programme, treatment centre etc."

Four of the options describe integration at differing levels of intensity. Use of the RGEPS in the study of teacher attitudes toward the integration of handicapped students allowed for a precise indication of the levels and types of mainstreaming programmes teachers favoured or did not favour for the handicaps under consideration.

Rucker and Gable (1973) report an inter-rater reliability score of .99 for the total scale and reliabilities of .87 to .99 for the six area scores. Split-half internal consistencies for the total attitude score ranged from .81 to .96 with a median around .90. Area attitude score reliabilities ranged from .36 to .95 with a median around .77. The least internal consistency is associated with the "severe level of handicap" score. Thus, rigorous validation studies have shown that the instrument accurately measures teacher attitudes toward handicapped students.

The second instrument, the Demographic Data Sheet, was developed by this investigator for use in the study. Data gathered by this questionnaire provided information concerning teachers' sex, age and

professional background. The 7 questions developed for the sheet are brief and involve either checking (✓) an answer or providing a one word response..Copies of both instruments can be found in Appendix I.

Limitations

There are a number of limitations inherent in the design of the study:

(1) Limits of time and funds imposed on the research prevented the optimal multi-province sample. The study was restricted to the provinces of Manitoba and Ontario. Yet it should be noted that Manitoba and Ontario were at different stages of implementing integration of handicapped students into regular education settings. It should be noted also that the two provinces were not exceptional in their development of the mainstreaming concept, allowing for generalization of results.

(2) There is difficulty in establishing clearly defined causal relationships between the demographic variables such as teacher experiences education, grade level, and teacher attitudes. Therefore, it is not possible to relate variables in a one-way causal direction to other variables with the present research design. Again because of limits of time and funds it was not possible to conduct a series of investigations in a longitudinal format.

Summary

Elementary inservice and preservice teachers of the provinces of Manitoba and Ontario constituted the population for this investigation. A sample of 50 subjects was chosen to represent each of four groups: Manitoba preservice teachers, Manitoba inservice teachers, Ontario preservice teachers, and Ontario inservice teachers. The Rucker Gable Educational Programming Scale (Rucker and Gable 1973) and a Demographic Data Sheet were used to gather the necessary data.

CHAPTER IV

RESEARCH RESULTS AND DISCUSSION

The Data Analysis

Data were collected from 200 subjects from the provinces of Manitoba and Ontario in order to answer the research questions. The information obtained from the RGEPS and a Demographic Data sheet was analyzed for this purpose. This chapter describes the analyses of data that were used to determine the attitudes that elementary teachers and student teachers held toward the integration of handicapped students into the regular classroom. The relationship found between these attitudes and certain demographic variables is also reported. The analysis was divided into six phases as follows:

1. A three factor (Province of Origin x Professional Status x Type of Handicap) Analysis of Variance (ANOVA) with repeated measures of the "Type of Handicap" factor (ANOVA I).
2. Bonferroni t-tests to explore significant ANOVA F-tests found above.
3. A three factor (Province of Origin x Professional Status x Severity of Handicap) ANOVA with repeated measures of the "Severity of Handicap" factor, (ANOVA II).
4. Bonferroni t-tests to explore significant ANOVA F-tests found above.
5. Ancillary one factor ANOVAs for each of the demographic variables of age, sex, highest degree earned and grade level taught, (ANOVA III).
6. Multiple t-tests to explore significant ANOVA F-tests found above.

A .01 critical value was used to judge the statistical significance of each ANOVA F test. Significant F tests were probed with pairwise Bonferroni t tests (Dunn, 1961) using a family wise significance level of .01. Thus, each t test was tested at $.01/c$ level of significance where c refers to the number of contrasts in a given family of pairwise contrasts.

ANOVA I: Effects of Province of Origin, Professional Status and Type of Handicap on Attitude Toward Integration

A three-way repeated measures ANOVA was conducted to examine the effects of province of origin, professional status and type of handicap on attitude toward integration. The means and standard deviations for each ANOVA sub-grouping are presented in Table 2.

TABLE 2

Means and Standard Deviations () for Attitudes Toward Type of Handicap by Province of Origin and Professional Status

Type of Handicap	Manitoba Student	Manitoba Regular	Ontario Student	Ontario Regular	Combined Means
Mentally Handicapped	3.31400 (0.61909)	3.16000 (0.73179)	3.29800 (0.71898)	2.76000 (0.67974)	3.13300
Emotionally Disturbed	5.08000 (0.72983)	5.04600 (0.88276)	5.06800 (0.84357)	4.50800 (0.78840)	4.92550
Learning Disabled	4.45400 (0.54256)	4.47000 (0.83477)	4.53600 (0.65208)	4.17000 (0.58841)	4.40750
Combined Means	4.28267	4.25533	4.30067	3.81267	4.15533

The results obtained from the ANOVA are presented in Table 3.

TABLE 3

Source Table Obtained from an ANOVA for the Effects of Type of Handicap,
Province of Origin and Professional Status on Attitude Toward Integration

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability	Greenhouse Geisser Probability
Province of Origin	5.84107	1	5.84107	5.17	0.0241	
Professional Status	11.15206	1	11.15206	9.87	0.0019*	
Province x Prof. Status	6.95527	1	6.95527	6.15	0.0140	
Error	221.53454	196	1.13028			
Type of Handicap	340.38202	2	170.19101	763.03		0.0*
Type x Province	0.69743	2	0.34872	1.56		0.2118
Type x Prof. Status	0.77543	2	0.34872	1.74		0.1789
Type x Prov. x Prof. Status	0.17043	2	0.08522	0.38		0.6722
Error	87.43466	392	0.22305			

*Significant at 0.1 level of confidence

There were two significant effects obtained from the analysis as summarized in Table 3. One was due to the professional status of the teacher, regardless of province of origin or the type of handicap under consideration. Reference to the means presented in Table 2, indicates that the student teachers had a more favourable attitude toward integration than the regular teachers (Student Mean = 4.29167; Regular Mean = 4.01900).

The other significant effect was due to the type of handicap, regardless of province of origin or professional status. In order to determine where this significance lay, t-tests were performed on all possible pairs of differences between the three combined means 'Type of Handicap' factor. The results are presented in Table 4.

TABLE 4
Results of t-tests Probing the Effects of Type of
Handicap on Attitude toward Integration

Comparison	Mean	Standard Deviation	t Value**	Degrees of Freedom
Mentally Handicapped vs Emotionally Disturbed	3.1330 4.9255	0.719 0.843	-38.30*	196
Mentally Handicapped vs Learning Disabled	3.1330 4.4075	0.719 0.674	-29.84*	196
Emotionally Disturbed vs Learning Disabled	4.9255 4.4075	0.843 0.674	9.97*	196

*Significant at .01 level of confidence

**Critical Value = ± 2.94

As seen in Table 4, all of the means for type of handicap were significantly different from one another. Examination of the means revealed that the most favourable attitude was expressed toward the ED, then the LD with the least favourable attitude directed toward the Mentally Handicapped (MH).

ANOVA II: Effects of Province of Origin, Professional Status
and Severity of Handicap on Attitude Toward Integration

A three-way repeated measures ANOVA was conducted to examine the effects of province of origin, professional status and severity of handicap on attitude toward integration. The means and standard deviations for each ANOVA sub-grouping are presented in Table 5.

TABLE 5

Means and Standard Deviations () of Attitudes Toward Severity of Handicap by Province of Origin and Professional Status

Severity of Handicap	Manitoba Student	Manitoba Regular	Ontario Student	Ontario Regular	Combined Means
Mildly Handicapped	5.54460 (0.65177)	5.49260 (0.77682)	5.59000 (0.82394)	5.23000 (0.76405)	5.46430
Moderately Handicapped	4.34380 (0.57739)	4.32900 (0.73572)	4.35620 (0.67741)	1.95520 (0.59024)	2.27620
Severely Handicapped	2.44320 (0.65599)	2.26660 (0.81957)	2.43980 (0.77086)	1.95520 (0.74412)	2.27620
Combined Means	4.11054	4.02940	4.12867	3.66260	3.98280

Table 6 presents the results of the ANOVA.

TABLE 6

Source Table Obtained from an ANOVA for the Effects of Severity of Handicap,
Province of Origin and Professional Status on Attitude Towards Integration

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability	Greenhouse Geiser Probability
Province	4.55581	1	4.55581	4.06	0.0453	
Professional Status	11.22854	1	11.22854	10.00	0.0018*	
Province x Professional Status	5.55651	1	5.55651	4.95	0.0273	
Error	220.17916	196	1.12336			
Severity	1031.59906	2	515.79953	2386.09		0.0*
Severity x Province	0.57207	2	0.28603	1.32		0.2641
Severity x Professional Status	0.39656	2	0.19828	0.92		0.3785
Severity x Province x Professional Status	0.44391	2	0.22195	1.03		0.3430
Error	84.73837	392	0.21617			

*Significant at .01 level of confidence

There were two significant effects obtained from the analysis as summarized in Table 6. One was due to the professional status of the teacher, regardless of province of origin or severity of handicap. Reference to the means presented in Table 5 indicates that the student teachers expressed a more favourable attitude than the regular teachers (Student mean = 4.11961, Regular mean = 3.84600.)

The other significant effect was due to severity of handicap. In order to determine the source of significance, t-tests were performed on all possible pairs of differences between the three means of the severity of handicap factor. The results are presented in Table 7.

TABLE 7
Results of t-tests Probing the Effect of Type
of Handicap on Attitude

Comparison	Mean	Standard Deviation	t Value**	Degrees of Freedom
Mildly Handicapped vs Moderately Handicapped	5.4619 4.2066	0.764 0.685	33.20*	196
Mildly Handicapped vs Severely Handicapped	5.4619 2.2767	0.764 0.770	55.49*	196
Moderately Handicapped vs Severely Handicapped	4.2066 2.2767	0.685 0.770	45.90*	196

*Significant at the .01 level of confidence

**Critical Value = ± 2.94

As seen from Table 7, all of the means for severity of handicap were significantly different from one another. Examination of the means revealed that the most favourable attitude was expressed toward the Mildly Handicapped, then the Moderately Handicapped, with the least favourable attitude directed toward the Severely Handicapped.

ANOVA III: Effects of Age, Sex, Highest Degree Earned and Grade Level Taught on Attitude Toward Integration

Ancillary one-way ANOVAs were conducted in order to examine the effect of each of the demographic variables of age, sex, highest degree earned, and grade level taught on the Total Attitude score. These results are presented in Table 8.

TABLE 8

Results of One-Way ANOVA for the Effects of Age, Sex, Highest Degree Earned and Grade Level Taught on Total Attitude Score

Variable	Source	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Probability
Age	Between Groups	3	5109.4852	1703.1616	4.871	0.0027*
	Within Groups	196	68535.1650	349.6692		
	Total	199	73644.6250			
Sex	Between Groups	1	4926.0048	4926.0039	14.193	0.0002*
	Within Groups	198	68718.6250	347.0637		
	Total	199	73644.6250			
Highest Degree Earned	Between Groups	2	3300.8866	1650.4431	4.622	0.0109 ⁺
	Within Groups	197	70343.8032	357.0750		
	Total	199	73644.6875			
Grade Level Taught	Between Groups	2	7589.4331	3794.7166	11.317	0.0000*
	Within Groups	197	66055.2344	355.3057		
	Total	199	73644.6250			

*Significant at .01 level of confidence

⁺Nearly significant at .01 level of confidence

Significant effects were found for three variables: age, sex and grade level taught. Since there were only two groupings for the variable sex, further statistical testing was not necessary, as with the other variables, to discover the source of the significance. Examination of the means in Table 9 revealed that males expressed a more favourable attitude toward integration than females.

TABLE 9

Means and Standard Deviations for Total Attitude Scores
of Males and Females

Variable	Number of Respondents	Mean	Standard Deviation
Males	42	134.2857	23.323
Females	158	122.1013	17.194

The other significant effects were further analyzed through the use of multiple t-tests. The variable Highest Degree Earned was included in this analysis because it had been very close to being significant in the ANOVA. The results of the t-test analysis are presented in Tables 10 to 12.

TABLE 10

Results of t-test Probing the Effect of Age,
on Total Attitude Score

Comparison	Number of Respondents	Mean	Standard Deviation	t Value (Critical Value)	Degrees of Freedom
20-29 vs 30-39	134 44	128.1716 118.0227	18.480 20.785	2.89 (±3.24)	67
20-29 vs 40-49	134 10	128.1716 118.5000	18.480 16.161	1.81 (±3.97)	11
20-29 vs 50-59	134 12	128.1716 114.9167	18.480 14.106	3.03 (±3.71)	15
30-39 vs 40-49	44 10	118.0227 118.5000	20.785 16.161	-0.08 (±3.63)	17
30-39 vs 50-59	44 12	118.0227 114.9167	20.785 14.106	0.60 (±3.44)	26
40-49 vs 50-59	10 12	118.5000 114.9167	16.161 14.106	0.55 (±3.60)	18

TABLE 11

Results of t-tests Probing the Effect of Highest Degree Earned
on Total Attitude Score

	Number of Respondents	Mean	Standard Deviation	t-Value (Critical Value)	Degrees of Freedom
Certificate vs Bachelors	26	115.5385	12.455	-3.52* (±3.30)	47
	169	125.6509	19.589		
Certificate vs Master's	26	115.5385	12.455	-3.32 (±5.74)	4
	5	138.6000	22.367		
Bachelors vs Master's	169	125.6509	19.589	-1.28 (±5.74)	4
	5	138.6000	22.367		

*Significant at the .01 level of confidence

TABLE 12

Results of t-tests Probing the Effect of Grade Level Taught
on Total Attitude Score

Comparison	Number of Respondents	Mean	Standard Deviation	t Value (Critical Value)	Degrees of Freedom
K-3 vs 4-6	54 48	114.6111 127.0833	14.069 23.144	-3.24* (±3.01)	76
K-3 vs Student Teachers	54 98	114.6111 129.0102	14.069 17.700	-0.550* (±2.91)	131
4-6 vs Student Teachers	48 98	127.0833 129.0102	23.144 17.700	-.51 (±3.01)	75

*Significant at the .01 level of significance

As seen in Table 10, there were no significant differences between the mean attitude scores for the four age groupings. Table 11 indicates that there was a significant difference between the mean attitude score of persons with Bachelor's degrees and those with a Certificate. Finally, Table 12 indicates that there were two significant differences for the variable Grade Level taught. Teachers at the 4-6 level had a more favourable attitude than those at the K-3 level. A more favourable attitude was expressed by student teachers when compared to K-3 teachers.

Summary of Findings

The findings of the analyses of data are summarized below.

1. Type of handicap effected teachers' attitudes. The subjects were most accepting of the ED, then LD and lastly, the MH.
2. Severity of handicap effected teachers' attitudes. Teachers were less accepting as the degree of handicap increased.
3. Province of origin did not effect attitude toward integration.
4. Males were more accepting of handicapped students in the regular classroom than females.
5. Age did not effect attitude toward integration.
6. Student teachers expressed more favourable attitudes toward integration than regular teachers.
7. When the groups were re-combined, both student teachers and grade 4-6 teachers were found to have more favourable attitudes toward integration than K-3 teachers. The attitudes of student teachers and grade 4-6 teachers were not significantly different.

8. Those subjects having Bachelor's degrees expressed more favourable attitudes toward integration than those with certificates. There were no significant differences found for the Master's versus Certificates analysis, nor the Master's versus Bachelor's analysis.

Discussion of Findings

Type of handicap was found to have a significant effect on teachers' attitudes toward integration. The MH student was the least favoured, concurring with the findings of previously conducted research (Guerin, 1979; Hirshoren and Burton, 1979; Moore and Fine, 1978; Williams, 1977; Williams and Algozzine, 1979). The high level of consistency of this finding across a number of different research studies lends credence to the one reported here. It has become very evident that teachers are, comparatively, most uncomfortable with MH students. The most accepted group was the ED students, leaving the LD students as the second choice of the three in this study. Preference for ED students over LD has been found in some studies (Hirshoren and Burton, 1979; Williams, 1977) while the reverse has also been found (Williams and Algozzine, 1979). In light of the consistent findings regarding MH students, one might expect the same consistency when other handicaps are considered. Perhaps local differences in the implementation of integration programmes such as the provision of support for integrated handicapped

students, or preparation of the regular classroom teacher receiving these children might account for the variability in findings.

The relationship of teacher attitudes toward integration and the severity of handicap of potential students has received virtually no attention in the literature. It is not possible, therefore, to assess the findings of this study that teachers are less accepting as severity increases, in the light of previous research. A statement made to Feitler and Dubasik (1978) by the teachers in their study may be of utility, however, in interpreting the findings reported in this research. The teachers in the Feitler and Dubasik study qualified their willingness to accept EMH students into their regular classrooms with the proviso that the students could perform the academic work. A resistance to modifying the regular curriculum for handicapped students may account for the lower levels of acceptance of severely handicapped students. Concerns about the extra work load and the special skills involved in making such modifications may account for this resistance on the part of the teachers.

The province of origin of the subject was not significantly related to attitude. It was anticipated that differences between the provinces might be found in the style in which integration is practised. Factors such as length of time integration has been practised, differing levels of funding and support by the governmental departments of education and differences in teacher preparation were all perceived as potentially influential. The possibility of generalization of findings from one region of Canada to another is suggested by this research.

Male teachers were found to be more accepting of handicapped children in the regular classroom than female teachers. While this finding concurs with the findings of Penn (1979), most researchers have found teachers' attitude toward integration to be unrelated to their sex (Clapp, 1979; Conine, 1968; Greene, 1977; Hughes, 1978c) Ingram, 1976; Kendall, 1979; Kulbeida, 1972; Pietroski, 1979; Siglar and Lazar, 1976). Males were underrepresented in this study by a proportion of one to three. Perhaps if samples of subjects were chosen specifically to investigate the possible relationship of respondent's sex to attitude, a different result would be obtained. The wealth of research studies finding no effect for sex suggest that a great deal of significance should not be attached to this finding.

A significant effect for age on attitude was not found in this study. This is in concurrence with the findings of other researchers (Clapp, 1979; Kendall, 1979; Kulbeida, 1972; Rivera-Valentin, 1978; Siglar and Lazar, 1976). Since teachers' attitudes seem to be impervious to the effects of age, it suggests that a number of other factors related to age may not effect attitudes. Among these factors are years of teaching experience, changes in marital and parental status, contact with handicapped persons, contact with other professionals and organizations and a host of others. The suggestion is that attitudes may in fact be quite rigid once formed. The problem of sampling, however, should be considered with this factor as with all the demographic factors. There were many more respondents in the 20-29 age range than in the other ranges although they were more similar to each other. Since the groups were not specifically formed to look at this factor,

one must interpret these results with caution in spite of the strong support from the literature.

The significant difference found in the attitudes of the student teachers when compared to the regular teachers further emphasizes the need to carefully interpret the results obtained for the age factor. The younger student teachers had a significantly more favourable attitude toward integration. It is not being suggested that the major thrust of this comparison was a further examination of the age factor. It is useful, however, to consider how the two findings appear to be contradictory. The attitudes of student teachers toward integration have received virtually no attention in the research literature making comparisons with the finding of this research impossible. The more positive attitudes of the student teachers might be expected as a result of the enthusiasm of youth. Perhaps they have not had sufficient contact with the field to become aware of the difficulties inherent in integration, and so view their ability to provide for handicapped children with greater confidence.

The attitudes of the student teachers and regular teachers were further defined by breaking the latter group into two sub-groups, grade K-3 teachers and grade 4-6 teachers. The attitudes of the student teachers and the grade 4-6 teachers were not significantly different from each other and both groups' attitudes were significantly more positive than the grade K-3 teachers' attitudes. If the trend found in most elementary schools held true in this sample, then proportionately more males were likely found in the grade 4-6 group. Males in this sample were found to have a more accepting attitude toward integration. Perhaps this finding of a more positive attitude in the grade 4-6

teachers is due to a clustering of males in this sub-grouping. A tendency for attitude to become more negative as grade level increases has been found by Larrivee and Cook (1979) and Stephens and Braun (1980). The finding of this research is in the opposite direction. This leads to further speculation about the possibility of the influence of other variables on attitude, both those measured in the study and others.

The level of education attained by a teacher as measured by the highest degree earned produced mixed results when considered in relation to attitude. Those respondents with Bachelor's degrees were found to have a significantly more positive attitude toward integration than those with Certificates, suggesting that increased education leads to more positive attitudes. There was, however, no significant difference in attitude between those with Certificates and those with Masters degrees. Additionally, there was no significant difference in attitude between those with Bachelors and those with Masters degrees. Perhaps these apparently contradictory findings can be explained by the fact that there were only five persons in the sample with Masters degrees. When working with such small groups, the critical value required to find a significant statistical difference becomes large, making it more difficult to obtain significant findings. Mixed results can be found in the literature regarding the effect of teacher education on attitude. No relationship between attitude and level of education has been reported (Hughes, 1978 Kendall, 1979; Kulbeida, 1972; Pietroski, 1979; Rivera-Valentin, 1978). A positive relationship between level of education and attitude was found in teachers surveyed by Lake (1978), Peters (1978), Robinson (1977) and Smart, Wilton and Keeling (1980).

Summary of the Chapter

This chapter reported the results of the analyses of data using a three factor ANOVA with repeated measures and Bonferroni t-tests to explore significant F-tests for the following two analyses:

Analysis I

Province of Origin x Professional Status x Type of Handicap

Analysis II

Province of Origin x Professional Status x Severity of Handicap

Additionally, the results of a series of one factor ANOVA and multiple t-tests to explore significant F-tests were reported for the demographic variable of age, sex, highest degree earned and grade level taught (Analysis III).

In Analysis I, type of handicap was found to be significantly related to teacher attitudes. From most accepted to least accepted, the types of handicap were ED, LD, and MH. A second significant effect was found for professional status with student teachers expressing the more favourable attitude when compared with the regular teachers.

In Analysis II, the significant effect for professional status was repeated along with a significant effect for severity of handicap. As the severity of handicap increased, the respondents became less supportive of integration. Province of origin was included in both Analysis I and Analysis II, but no effect was found for this factor in either analysis.

In Analysis III, the factors of sex, grade level taught and highest degree earned all produced significant results. Males were more accepting of integration than females. Teachers of grades 4-6 and student teachers favoured integration more than the grade K-3 teachers, and there were no significant differences between the 4-6 teachers and student teachers. Those respondents with Bachelors degrees had significantly more positive attitudes than those with Certificates. There were, however, no significant differences found for the pairings Certificates x Masters and Bachelors x Masters. There were no significant effects found for age.

The findings were discussed in light of the literature. The type of handicap findings were supported in the literature as were the findings for age. The results for the effects of sex and grade level taught were the opposite of the general concensus in the literature. Mixed results for the factor, highest degree earned, are reported in the literature and also in this study. Little or no attention in the literature has been directed toward the factors severity of handicap, province of origin and professional status making it impossible to assess the findings of this study with reference to the findings of other researchers. Caution was advised in interpreting the findings regarding the age, sex, highest degree earned and grade level taught factors since recombining the subjects into the groupings results in some very large and small group sizes. This resulted in the requirement for large critical values in order to show a statistical difference.

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This chapter presents a summary of the research reported in this thesis. The conclusion, implications and recommendations for further research arising from this study are also included.

Summary

Data were collected from 200 teachers and student teachers in the provinces of Manitoba and Ontario in order to examine the potential relationships of several factors to the teachers' attitudes toward the integration of handicapped (LD, ED, MH) students. These factors were:

1. Type of Handicap
2. Severity of Handicap
3. Province of origin
4. Professional status
5. Age
6. Sex
7. Highest degree earned
8. Grade level taught

Data were collected using the Rucker-Gable Educational Programming Scale (Rucker and Gable, 1974) and the Demographic Data Sheet, composed by the writer for the purposes of this study. A three factor ANOVA with repeated measures and Bonferroni t-tests or a one factor ANOVA with multiple t-tests were used to analyze the data.

Conclusions

1. Type of handicap was significantly related to attitude.
2. Severity of handicap was significantly related to attitude.
3. Province of origin was not significantly related to attitude.
4. Professional status was significantly related to attitude.
6. Sex was significantly related to attitude.
7. Highest degree earned was significantly related to attitude in one comparison, but not in the remaining two.
8. Grade level taught was significantly related to attitude.

Implications

The teachers in this study demonstrated differing levels of acceptance of handicapped students for regular classroom placement depending on the type and severity of their handicaps. This suggests that the problem of fostering teacher acceptance of handicapped children is complex and may require unique methods of preparation for various handicapping conditions. Certainly, the consistent tendency for teachers to be unaccepting of MH children needs close attention in order that these students be provided an optimal educational climate. The non-acceptance of severely handicapped children also merits special attention so that these high need children will have the opportunity to experience the full range of benefits that integration with their non-handicapped peers can provide. The implications for those administrators responsible for placing handicapped children into integrated settings are clear. Teachers are not likely to respond in a uniform fashion to all handicapped children. Care must be taken to assess

teachers' attitudes and to offer the support necessary to facilitate an acceptance of integrated handicapped children.

Province of origin was not related to attitude which is suggestive of a certain universality of attitude on the Canadian education scene. The implication is that findings from one area of Canada may be directly applicable to another. Further, programmes and strategies for attitudinal development found successful in one area of the country may be of utility in another. Those programmes and strategies which have failed in one region can be avoided elsewhere.

Student teachers were found to be more accepting of handicapped children. The challenge to all educators is the maintenance of the high professional ideals typified by this stage in teachers' careers. The enthusiasm demonstrated by these teachers should be employed by administrators while being careful not to over-tax a beginning teacher who is coping with a number of new job-related stresses.

The analysis of the four demographic variables produced significant results in three cases and none in one case. Due to some concern about the recombination of the groups, the results must be interpreted with caution. There is some suggestion that those with higher levels of education may be more acceptant of handicapped children. This might suggest a course of action where these children would be placed preferentially with more highly qualified teachers. There is, however, the issue of fairness at stake here since the modification of curricula for a handicapped child entails much extra work for the teachers. Perhaps an alternate plan of encouraging all staff to continue their own educations would be more palatable. Preference for better educated teachers might be exercised when hiring new staff.

Age and sex are personal characteristics which are not so easily manipulated as level of education. Since age was unrelated to attitude, there is no concern regarding this factor. Males, however, were found to be more acceptant of handicapped children than females. As suggested before, perhaps this finding was related to one of grade 4-6 teachers being more acceptant of integration, as males often tend to fill positions in the higher grades of the elementary school. Encouraging teachers to change grade levels periodically would possibly ameliorate this problem. Careful observations in the field would be necessary to determine the viability of the findings for the demographic factors as they might apply in each particular situation.

Recommendations for Further Research

A number of directions for additional research are suggested by these results.

1. Replication of the study or parts of it would help determine the representative value of the results obtained. This would be particularly useful where little attention has been directed before. The factors of severity of handicap, province of origin and professional status fall into this category.

2. Clarification of the roles that the demographic factors of "age", "sex", "grade level taught" and "highest degree earned" play in the formation of attitudes is required. These factors were studied in an ancillary fashion in this study. The designing and executing of a study specifically intended to study these factors would be of great utility.

3. The measure of teacher attitudes using a different format from that employed in this research would help in the general acquisition of knowledge in the field. Differences in findings and interpretations might help to refine the current conclusions and assumptions held by educators.

4. Longitudinal and cross-country sampling would help to determine the stability or dynamic nature of attitudes teachers hold in this country. This type of study would provide a stronger base upon which those who plan integration programmes could rely.

In conclusion, the normalization of the education of handicapped children has achieved official support in all areas of the country. The act of implementation, however, rests with the classroom teacher. That teacher's attitude toward integration can and will be translated into subtle and overt actions when presented with the responsibility of educating a handicapped child. It should be the goal of all educators to ensure that these children are accepted with enthusiasm, kindness and genuine concern.

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APPENDIX I

Instrumentation

Demographic Data Sheet

DEMOGRAPHIC DATA SHEET

- Grade Levels You Teach: K - 3 _____
4 - 6 _____
Not Applicable
(Student Teacher) _____
- Sex: Male: _____
Female: _____
- Age: 20 - 29 _____
30 - 39 _____
40 - 49 _____
50 - 59 _____
60 - _____
- Highest Degree Earned: Certificate _____
Bachelor's _____
Master's _____
Doctorate _____
- Total Years of Teaching Experience: _____
- Number of Courses Taken in Special
Education (Include University and
Provincial Ministry of Education
Courses) _____
- Number of Inservice or P.D. Days
Taken in Special Education: _____