

THE ATTITUDES OF
NON-HANDICAPPED CHILDREN TOWARD
HANDICAPPED CHILDREN IN THREE
EDUCATIONAL SETTINGS

by: PAMELA F. KLEIN

A thesis
submitted in partial fulfillment of the
requirements for the degree of
Master of Education in the Department
of Education Psychology
The University of Manitoba

June, 1983

THE ATTITUDES OF
NON-HANDICAPPED CHILDREN TOWARD
HANDICAPPED CHILDREN IN THREE
EDUCATIONAL SETTINGS

BY

PAMELA F. KLEIN

A thesis submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
of the degree of

MASTER OF EDUCATION

© 1983

Permission has been granted to the LIBRARY OF THE UNIVERSITY OF MANITOBA to lend or sell copies of this thesis, to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film, and UNIVERSITY MICROFILMS to publish an abstract of this thesis.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.



ABSTRACT

The main objective of this investigation was to study the attitudes of non-handicapped children toward handicapped children in the integrated, segregated and regular school settings at the grade four and grade six levels. PATHS questionnaire was administered to 124 grade four and grade six male and female children who were from the various educational settings. In addition, the teachers from the various classrooms were questioned on their perceptions of how the children in their classrooms interacted with handicapped children. Interviews were conducted with twenty percent of the subjects to assess the reliability of the questionnaire.

The data analysis indicated that the type of setting and the sex of the subject did not have a statistically significant effect on the attitudes of non-handicapped children toward handicapped children. By contrast, the analysis indicated that grade and type of handicap had a statistically significant effect on the attitude of non-handicapped children toward handicapped children. In addition, the teachers from the different settings expressed differences in their perceptions of the interactions between the non-handicapped children in their classrooms and handicapped children. PATHS was considered to be reliable across time.

The data analysis, implications and suggestions for further research are discussed in detail.

ACKNOWLEDGEMENTS

I would like to thank my thesis chairman Dr. J. Hughes and my other committee members Dr. I. McIntire and Dr. D. Jenkinson for their time, guidance and ideas, which proved vital in completion of this thesis.

Thanks is extended to Dr. J. Keselman whose assistance with the data analysis was greatly appreciated.

To those principals, teachers and students who participated in this investigation I am grateful.

For their endless support, optimism and encouragement I extend love and appreciation to my parents and family.

TABLE OF CONTENTS

		<u>Page</u>
Chapter 1	INTRODUCTION	1
	Overview	1
	Definition of the Problem	2
	Statement of the Purpose	2
	Hypotheses Tested	3
	Definition of Terms	4
	Limitations of Study	5
	Possible Implications	6
Chapter 2	REVIEW OF LITERATURE	7
	Attitudes and Integration	7
	Basis for Negative Attitudes	14
	Attitude Formation and Early Integration	16
	Fostering Positive Attitudes	18
	Conclusion	21

		<u>Page</u>
Chapter 3	METHOD	23
	Setting	23
	Integrated Setting	23
	Segregated Setting	24
	Regular Setting	25
	Subjects	26
	Testing Instrument	27
	Procedure	29
	Questionnaire	29
	Teacher Observations	31
	Follow Up	31
	Data Analysis	33
Chapter 4	RESULTS	35
	Experimental Results	35
	Analysis of Variance	35
	i) Main Effects	35
	ii) Interactions	36
	Test of Means	38
	i) Grade	38
	ii) Grade by Setting	38
	iii) Type of Handicap	42

Chapter 4	RESULTS (Continued)	<u>Page</u>
	Hypothesis One, Two and Three	43
	Hypothesis Four	44
	Hypothesis Five	44
	Hypothesis Six	45
	Follow Up	46
	Conclusion	48
Chapter 5	DISCUSSION	50
	Hypothesis One, Two and Three	50
	Hypothesis Four	52
	Hypothesis Five	52
	Hypothesis Six	56
	Basis for Attitude Formation	58
	Implications	59
	Suggestions for Further Research	60
	Conclusion	61
	Appendix I	69
	Appendix II	75
	Appendix III	80
	Appendix IV	81
	Appendix V	83

List of Tables

<u>Table</u>		<u>Page</u>
1.	Subjects	26
2.	ANOVA for the Variables Sex, Grade and Type of Handicapping Condition	37
3.	Means for the Variables Sex, Grade, Setting and Type of Handicapping Condition	38
4.	Grade Four by Setting Interactions	40
5.	Grade Six by Setting Interactions	41
6.	Type of Handicapping Condition Effect	43

CHAPTER 1

INTRODUCTION

Over the past few years there has been a move toward the integration of handicapped individuals into the regular school environment. Educators hope that positive social development will take place in the handicapped and non-handicapped individual as a result of physical and social integration. Thus, it is necessary to consider whether or not the placement of non-handicapped and handicapped peers together does ensure social acceptance and positive attitudes toward the handicapped.

Research conducted to assess the attitudes of non-handicapped toward handicapped children has suggested that exposure of non-handicapped children to handicapped children does not necessarily ensure that positive attitudes and positive social interaction will result (Strauch, 1970; Apolloni, Cooke & Cooke, 1977; Asher & Gottman, 1981). Several researchers suggest that to ensure that the integrated setting fosters positive acceptance it is necessary for the teacher to accompany the exposure with programs which will encourage both positive attitudes and positive social interactions (Guralnick, 1976; Apolloni, Cooke & Snyder, 1977; Raver, 1979). If integrated classrooms are recommended on the basis of fostering

greater acceptance of the handicapped child this question needs to be investigated in an effort to justify this claim. Children's attitudes as they exist across educational settings such as integrated, segregated and regular classroom need to be evaluated.

Problem

Research conducted on the attitudes of non-handicapped peers toward handicapped peers does not present a clear picture as to which environment encourages the most positive attitudes. Investigations usually compare attitudes in an integrated setting and a regular setting (no exposure) or a segregated setting and the regular setting. A three way comparison of settings may provide a clearer picture as to whether or not there are differences in the attitudes of non-handicapped children toward handicapped children in different educational settings (integrated, segregated and regular) and which environment produces the greatest acceptance.

Purpose

The purpose of this study is to investigate the attitudes of non-handicapped children toward handicapped children in three

different settings: an integrated school setting, a segregated school setting and a regular school setting at the grade four and grade six level.

Hypotheses

i) There are differences in the attitudes toward handicapped children of those non-handicapped children in an integrated setting and those children in a regular setting when subscale scores and total scores of "PATHS" questionnaire are compared.

ii) There are differences in the attitudes toward handicapped children of those non-handicapped children in a segregated setting and those children in a regular setting when subscale scores and total scores of "PATHS" questionnaire are compared.

iii) There are differences in the attitudes toward handicapped children of those non-handicapped children in an integrated setting and those children in a segregated setting when subscale scores and total scores of "PATHS" questionnaire are compared.

iv) There are differences in the attitudes of non-handicapped males and females toward handicapped children.

v) There are differences in the attitudes of grade four and grade six students toward handicapped children.

vi) The teachers in the various settings will express observed differences in the attitudes of non-handicapped children toward han-

dicapped children.

Definitions of Terms

i) Attitudes: "Attitudes are selectively acquired and integrated through learning and experiences...they are enduring dispositions indicating response consistency...positive or negative affect toward a social or psychological object." (Goodwin and Driscoll, 1980 p. 286)

ii) Integrated Setting: "An integrated setting refers to the environment wherein non-handicapped and handicapped children interact socially, affectively and educationally. Such less restricted environments have been thought to produce increased opportunity for normalized social learning." (Apolloni, Cooke and Cooke, 1977 p. 531). There is a maximum exposure to handicapped individuals in the integrated setting.

iii) Segregated Setting: The segregated setting refers to the school wherein classes of handicapped individuals are separate from the classes of non-handicapped individuals. The exposure and interaction between the non-handicapped and the handicapped children is less than the interaction in the integrated setting. Integration between the handicapped and the non-handicapped may take place during such times as recess, music, physical education, or art.

iv) Regular Setting: The regular school setting refers to the school wherein there are only classes of non-handicapped children. There is no exposure, within the school, to handicapped children.

v) Handicapped Individuals: Handicapped individuals are those children who exhibit at least one and possibly more handicapping conditions. The handicaps may be mental, physical, behavioral or learning related in nature. The children have been identified, as having a handicap by the appropriate professionals.

vi) Non-Handicapped Individuals: Non-handicapped individuals are those children who have not been identified as having any of the handicapping conditions described in number v.

Limitations of the Study

Questionnaires have been considered to be one of the more effective instruments for assessing attitudes (Dyer, 1979). However, the results of a questionnaire are only as good as the subject's responses are honest. The researchers can only hope that the responses are honest and open reflections of the subject's attitudes.

The generalizability of the results of this study may be limited. The population from which the sample of integrated and segregated schools was chosen may limit the generalizability outside of Winnipeg. The sample size of the regular school setting may also limit the generalizability.

The generalizability may also be limited because of the inability to ensure the same socioeconomic status across subjects. Again, the limited population size from which the integrated and segregated schools were selected accounts for this lack of control. The segregated and regular schools were matched for socioeconomic status.

Possible Implications

This study attempted to assess the attitudes of non-handicapped children toward handicapped children. With an understanding of the observed mean differences in attitudes the three educational settings bring about, educators will be in a better position to program activities which may foster positive attitudes. In addition educators will be in a better position to evaluate the affects of segregation, integration, age, sex and type of handicapping condition on children's attitudes toward the handicapped.

CHAPTER 2

REVIEW OF LITERATURE

There has been a variety of research conducted to investigate the attitudes of non-handicapped children toward handicapped children. The results of the research are not always consistent across studies. Some of the research supports the contact hypothesis which suggests that physical integration is enough to ensure attitude change. However, there is a body of research that suggests physical integration is not sufficient rather; it is necessary to develop strategies to ensure interaction between the groups as a means of fostering social integration and positive attitude change toward the handicapped. The chapter presents research conducted on attitudes, attitude formation and the influences of various educational settings on acceptance of handicapped children.

Attitudes and Integration

One of the main arguments for mainstreaming and behind the movement toward the integration of retarded students into the regular school classroom is that the contact between the two groups would result in positive consequences. In Asher and Gottman (1981, p 154), Gottlieb and Leyser discuss the contact hypothesis: "According to the contact hypothesis, as retarded children were enrolled in regular

classes, normal children would become more familiar with them and would like them better as a result." Gottlieb and associates (Ballard, Corman, Gottlieb & Kaufman, 1977, Gottlieb, Semmel & Veldman, 1978 and Gottlieb & Leyser, 1980) investigated the contact hypothesis in a variety of environments but failed to find evidence to support its assumptions. An extension of the hypothesis suggests that increasing the amount of time of contact between educable mentally retarded (EMR) and non-EMR children would improve the social status of EMR; however, an investigation of the amount of academic time that the EMR were integrated did not significantly affect their social status (Gottlieb, Semmel & Veldman, 1978).

Bruininks, Gross and Rynders (1974) were interested in both the differences in the social acceptance of retarded children enrolled in regular classrooms and the difference in acceptance of the retarded children in regular classrooms within suburban and urban centers. The authors found, using The Peer Acceptance Scale (Bruininks, Gross and Rynders, 1974), that mildly retarded urban children received a higher rating than non-retarded children; however, the mildly retarded children received lower ratings than the non-retarded children in the suburban center.

The results obtained by Strauch (1970) are in keeping with the results of Gottlieb and associates (1977, 1978, 1980) in that social

contact alone did not appear to promote positive attitudes. The technique used by Strauch (1970) was that of semantic differential. The scale compared the expressed attitudes of normal adolescents who had had contact with EMR adolescents and those attitudes of normal adolescents who had had no contact with EMR adolescents.

When questioned on their attitudes toward mentally retarded children and crippled children, high school students were positive toward the crippled children (Gottlieb & Gottlieb, 1977). Regardless of the subjects' sex or age, the significant main effect indicated that the crippled children were evaluated more favourably than the mentally handicapped children. The authors suggested that the dif-

A study conducted by Reese-Dukes and Stokes (1978) does not support the contact hypothesis. The author found that EMR children who have been mainstreamed at the fifth and sixth grade level received significantly lower sociometric ratings than their non-EMR classmates. In addition, Reese-Dukes and Stokes found that lower ratings for EMR students were consistent across sexes. However, opposite sex ratings were lower. In another sociometric investigation, Iano, Ayers, Heller, McGettigan and Walker (1974) found that retarded children who had participated in an integrated

setting were no more accepted by non-retarded children than those EMR who were not integrated.

When children have a choice, non-retarded children are generally accepted twice as often as retarded children, and retarded children are rejected as much as four times as often as non-retarded children (Wong & Perkins, note 3). However, if the only playmate available is a mentally handicapped individual, the non-handicapped individual will choose to play with the handicapped individual as opposed to playing alone (Guralnick, 1980).

The attitudes of fourth, fifth and sixth grade non-handicapped students toward trainable mentally retarded (TMR) students were investigated (Sandberg, 1982). The subjects were from an integrated and a regular school. The author also investigated the effects of age on attitudes. A two-part instrument designed to assess the attitudes of the non-handicapped students was administered. Sandberg found no statistically significant differences in the attitudes of the students in either the integrated or regular settings. The attitudes generally tended to be neutral. Finally, girls were more accepting of the TMR and the older children were less accepting of the TMR.

The preceding research indicated that the contact hypothesis is not true for mentally handicapped children. Gresham (1982)

claims that the assumption that placement of handicapped children in regular classrooms will result in the social acceptance of the handicapped by the non-handicapped is an incorrect assumption of mainstreaming.

One study (Sheare, 1974) found results that supported the contact hypothesis. The author argued that if limited contact adversely affects the social acceptance of the retarded, then increased interaction between the retarded and non-retarded should lead to greater social acceptance. Students were randomly assigned to two different classrooms, one classroom with no EMR students and one integrated classroom. Sheare then administered a questionnaire designed to measure the attitudes of four hundred non-retarded junior high students. The results indicated that the experimental group (non-EMR students integrated with EMR students) exhibited greater acceptance toward EMR than the control group (no interaction).

Gerald Peterson (1974) used an attitude scale to assess differences in attitudes of adolescents toward handicapped individuals who had contact with handicapped persons and those who had not. Sex and age differences were also considered. Peterson found contact subjects were more positive toward retarded individuals than the non-contact subjects. There were no significant differences in either sex or age. These results are in keeping with Sheare (1974).

A later study (McHale & Simeonsson, 1980) found results that were inconsistent with much of the attitudinal research. The investigation showed that when second and third grade students were interviewed about their understanding and attitudes toward autistic children who were mentally retarded, the normal children exhibited positive attitudes in pre-contact interviews. The positive attitudes of the normal children remained at high levels.

Parish, Ohlsen and Parish (1978) asked 44 fifth, 51 sixth and 36 seventh grade students to give adjectives which best described a target group of children. The target groups consisted of normal, learning disabled, physically handicapped and emotionally disturbed children. The normal children were described the most positively, the physically handicapped more favourably than the learning disabled, and the learning disabled were described more favourably than the emotionally disturbed.

Wilkins and Velicer (1980) assessed the attitudes of third and sixth grade students toward normal, crippled, retarded and mentally ill individuals. Four semantic differential scales were used (Evaluation Scale, Understandability Scale, Activity Scale and Potency Scale). On the Evaluation Scale, normal persons were rated more positively than retarded and crippled while mentally ill were rated the least positive. Normal and mentally ill were rated

more potent and active than retarded and crippled. The concept of mentally ill or crazy was the least understood. There were no differences in ratings between age groups, and males tended to rate more positively than females.

Harrington and Randolph (1981) found results similar to Parish, Ohlsen and Parish (1978). Randolph and Harrington investigated the attitudes of fifth graders to physically handicapped children. The authors asked the pupils, "How would you feel if a new child who was blind or who was in a wheelchair were to join our class?" (p.32). They found the normal children were accepting toward the handicapped children; however, the normal children showed signs of sorrow and pity toward the handicapped children. The authors suggest the feelings of sorrow and pity were as debilitating as an expressed negative attitude.

Wisely and Morgan (1981) studied the differences in social ratings of normal third and sixth grade children toward normal, physically handicapped and mentally retarded children. The authors also considered sex and age differences. The subjects were shown slides and tapes of the target children and asked to rate them using an adjective checklist, a social-distance scale, an activity preference scale, and an acceptance scale. Physically handicapped and retarded children were rated more positively than nor-

mal children on the activity scale, social-distance scale and acceptance scale; however, they were rated less positively on the attitude adjective checklist. Third grade pupils rated more positively than grade six pupils. Finally, males were more positive than females.

Research indicates that in some instances exposure to handicapped children does encourage positive attitudes toward handicapped individuals. In addition, males are often found to be more accepting than females. Similarly, there is no consistency with regards to differences in attitudes due to age.

Basis for Negative Attitudes

The question of what prompts a child to accept or reject a mentally retarded individual has been the focus of a number of studies. One study (Sipperstein and Chatillon, 1982) found that non-retarded children responded more positively to retarded individuals who were similar and shared with the non-retarded children common interests such as sports, movies, books, etc. The authors found, consistent with Sheare's (1974) findings, that attitudes of non-retarded children were more positive among children who were familiar with and exposed to mentally retarded than those who were not.

Several researchers consider the reasons for the non-acceptance of retarded children. Gottlieb, Semmel and Veldman (1978) were

concerned about the correlation between the behavior of mentally retarded and their social status. Gottlieb et al, (1978) looked at misbehavior, academic incompetence, and exposure to mentally retarded to explain the sociometric status of the mentally retarded. The authors were concerned with "why" mentally retarded children are not generally accepted. Perceptions of EMR behaviors were obtained from third, fourth and fifth grade non-EMR students. A social acceptance scale (i.e. How I Feel Towards Others), a perception of cognitive ability - descriptive behavior scale (i.e. Guess Who?) and a teacher rating scale were administered. The results showed that the amount of exposure to non-retarded children did not significantly affect the social status of the retarded. However, the EMRs' social acceptance was associated with their perceived academic ability and the EMRs' rejection was associated to perceived behavior.

The evidence of the importance of perceptions in determining acceptance levels poses the question of how are perceptions formed. Several authors suggest that the "label" which is placed on handicapped children may contribute to negative peer attitudes. The attitudes expressed toward labelled mentally retarded children were more negative than those attitudes expressed toward the same individual not labelled (Cook & Wollersheim, 1976). Budoff and Sipperstein (1979) found "competency" labels to affect low-income children's

attitudes toward retarded children. Incompetent normal children were viewed less positively than competent children not labelled, whereas incompetent mentally retarded labelled children were viewed more positively than incompetent non-labelled children.

Gottlieb (1975) was interested in the effects of labels and aggressive behaviors on negative attitudes. In the investigation, third grade students were assigned to four treatment conditions: i) one quarter watched an actor who was labelled as retarded acting out, ii) one quarter watched an actor who was not labelled as retarded acting out, iii) one quarter watched an actor who was labelled retarded acting appropriately, iv) one quarter watched an actor who was not labelled retarded acting appropriately. Each child was asked to answer two questionnaires which were designed to identify differences in attitudes. The authors found that when the actor engaged in an acting out behavior and was not labelled, he was viewed more positively than the actor who was labelled. Gottlieb concludes that when 'inappropriate behavior' and a label of 'mentally retarded' are combined, the non-handicapped individual tends to exhibit a negative attitude toward that labelled individual.

Attitude Formation and Early Integration

Advocates of integration emphasize the importance of early integration (Guralnick, 1979). Peterson (1982) observed the play be-

haviors of four handicapped and four non-handicapped children.

The author found that pre-school children, who were four years of age, prefer like peers. The non-handicapped chose other non-handicapped children as playmates and the handicapped children chose handicapped children as playmates.

In an earlier study, Peterson and Haralick (1972) found that young non-handicapped children have a preference for playmates who showed similar abilities. During free play sessions, at-risk children preferred to play with other children identified as at-risk, as opposed to normal children.

Apolloni, Cooke and Snyder (1977) indicate that, if the environment is appropriately structured and adequate instruction is given, non-retarded children may develop positive attitudes toward the handicapped. Guralnick (1976) suggested that understanding, acceptance and positive attitudes toward retarded individuals will improve with early integration. The views of Apolloni et al, (1977), and Guralnick (1976) are supported by Raver (1979) in that by structuring the social and physical environment handicapped children will be better accepted.

Sandberg (1982) obtained results which support the evidence that early integration is important in fostering positive attitude formation. The author found that older children tend to exhibit less positive attitudes toward retarded individuals than do younger children. At-

itudes have been observed to be formed in children as young as four years of age (Cohen & Levitt, 1976). Adult attitudes and behavior towards handicapped individuals have been cited as influences on children's early attitude formation as children tend to model the parents behavior (Cohen, 1977 and Ludlow Note 2).

Fostering Positive Attitudes

In attempts to foster positive attitudes toward the mentally retarded, it is important to modify the social interactions of handicapped and non-handicapped individuals as well as to address the importance of diversity and individual difference (Thurman & Lewis, 1979).

Gottlieb and Leyser (1980, p. 459) suggest that, "failure to develop interventions to improve the social position of handicapped children represents a failure to provide them with the appropriate education to which they are entitled."

Differences in people become obvious to young children and should be confronted (Thurman & Lewis, 1979). Providing activities which focus on and encourage an understanding of physical and behavioral differences may facilitate acceptance of handicapped children. In addition, teachers can be provided with strategies to identify and deal with rejected children to encourage positive social status (Gottlieb & Leyser, 1980).

Attitudes have been shown to develop early in peoples' lives

(Cohen, 1977 & N. Peterson, 1982). There are ways to change and develop positive attitudes toward the handicapped individual. Normal children are effective peer models and tutors for handicapped children (Apolloni et al, 1976; 1977). As the behaviors of handicapped children improve, social interaction with non-handicapped individuals will increase and a positive level of acceptance may develop (Gottlieb & Gottlieb, 1977; Gottlieb & Leyser, 1980). If delayed children can effectively be taught to imitate peers, there will be great benefit in using peer models (Apolloni, Cooke & Cooke, 1977).

Research has been conducted to ascertain the correlation between the behaviors of retarded children and their acceptance. Results indicate that children tend to play with, interact with and prefer like peers (Clark, 1964; Cohen & Levitt, 1976; Apolloni, Cooke & Cooke, 1977; Gottlieb & Gottlieb, 1977; Gottlieb, Semmel & Veldman, 1978; Ludlow, Note 2, & N. Peterson, 1982). It is important to develop those behaviors which will be the most accepted among non-handicapped individuals to ensure the acceptability of the handicapped individual.

Apolloni and Cooke, (1976) were interested in developing behaviors in handicapped children which would make them more accepted by non-handicapped children. The authors conducted a

study to train handicapped children in positive social-emotional behaviors. Seven children took part in the study to see if positive social-emotional behaviors could be taught. Four of the subjects received training (modelling and positive reinforcement) to increase certain social behaviors (smiling, sharing, positive physical contacting and complimentary verbal statements). The behaviors were trained separately followed by a generalization period, during which time four untrained subjects were introduced. The researchers found that smiling, sharing and physical contact can be taught and generalized across subjects. Complimentary verbal statements did not increase significantly in either the trained or untrained group. This result was not considered unusual for young children. Children can be taught the behavioral components of dynamic, positive social-emotional relationships thus opening the door for greater acceptance among rejected children.

Ballard, Corman, Gottlieb and Kaufman, (1977) conducted research to support the hypothesis that cooperation to reach a common goal will help foster positive attitudes. The social-status of EMR children in grades three, four and five improved after the introduction of an experimental treatment. Groups of EMR and non-EMR children were formed. The treatment involved working towards a common goal. The treatment was designed to encourage positive

interaction within groups. Children worked together to develop a multi media presentation. The social acceptance of EMR children by non-EMR subjects who were part of the treatment condition did improve. The acceptance levels of non-EMR children, not involved in treatment, also improved, suggesting the generalizability of intervention.

Co-operative engagement, equal-status conditions, appropriate role models, in-service training for teachers and workshops for parents are factors which may help foster positive attitudes toward the handicapped (Cohen, 1977). Successful integration will depend on the development of positive attitudes toward the handicapped, an understanding of the perceptions of the non-handicapped toward the handicapped and the encouragement of positive social interactions (Frith & Mitchell, 1981). With the preceding guidelines and goals in mind, the integration of the non-handicapped and the handicapped should be successful.

Conclusion

Integration needs to be accompanied by both intervention and a sensitivity to the needs of both the handicapped and the non-handicapped individual. Research indicates that placement of handicapped children with non-handicapped children must follow or coincide with efforts to modify the handicapped children's in-

appropriate behavior patterns. Authors found that placement must also assume that handicapped children are more apt to be accepted by their non-handicapped peers when integration takes place (Gottlieb & Leyser, 1980).

The majority of research supports the contention that physical integration alone, is not enough to ensure that positive acceptance and positive social interaction will take place between the handicapped and the non-handicapped. Investigations have revealed that it may be necessary to implement programs into the classroom which will encourage the development of positive attitudes toward handicapped children.

CHAPTER 3

METHOD

The purpose of this investigation was to investigate the attitudes of non-handicapped children in three different settings: an integrated, a segregated and a regular school setting.

In this investigation a questionnaire was administered to grade four and grade six students at an integrated, a segregated and a regular school setting to assess their attitudes. Lord Roberts School of Winnipeg School Division No. 1 was selected as the integrated school because it was the only such school in Winnipeg. Polson School served as the segregated setting, and Lord Wolseley School was the regular school setting. Both schools were part of River East School Division in the city of Winnipeg. Permission was granted to use Polson in this investigation whereas permission was declined to use other segregated settings in Winnipeg. Lord Wolseley School was socioeconomically matched to Polson School.

The following is a more detailed description of the setting and subjects.

Setting

Integrated Setting

The philosophy at Lord Roberts was that the handicapped students participate in the same activities as the non-handicapped children; all students at Lord Roberts were fully integrated into

nursery to grade six classes. There were physically and mentally handicapped students at Lord Roberts. The physically handicapped children were children with varying degrees of orthopedic and neurological handicaps. Some of the handicapping conditions included cerebral palsy, muscular dystrophy, spina bifida, burn cases and other moderate to severe handicapping conditions.

The staff have done a great deal to ensure that integration would be successful. When Lord Roberts began to integrate, the staff attended inservices and simulation workshops. The teachers discussed with and explained to the children the handicapping conditions of the handicapped children. The students at Lord Roberts were able to practice with wheelchairs, walkers and to ask questions about handicaps. Books such as Open Doors (Note 4) and Kids Accepted Here (Note 5) were used to provide the teacher with ideas to help foster positive attitudes in the classroom. The teachers worked hard to encourage acceptance and to develop an understanding of the handicapped amongst the non-handicapped.

Segregated Setting

Polson School was selected as the segregated setting. There were both handicapped and non-handicapped students at Polson School; however, full integration did not take place. Polson has mentally handicapped, physically handicapped and emotionally disturbed children. The school exhibited partial integration in that the handicapped

and non-handicapped children participated together in recess, assembly and school performances. The emotionally disturbed children were also integrated in physical education, music and library activities. Once a week, the grade five and grade six non-handicapped students conducted peer tutored reading programs with the handicapped children. The staff at Polson School encouraged integration when possible.

Regular Setting

The regular school setting was conceived as a setting which had no handicapped children. It was not possible to find such a setting which was both in the same school division and socioeconomically matched to one of the preceeding schools. Lord Wolseley was in the same school division as Polson School and was of similar socioeconomic status.

When this study was conducted there was one handicapped child at Lord Wolseley. The child was hearing impaired and wore a phonic ear. At the time of the investigation the child had been attending Lord Wolseley for three months and was attending morning Kindergarten. The non-handicapped children had experienced minimal exposure to the handicapped individual. Consequently, Lord Wolseley was considered to be a regular school setting.

The staff at Lord Wolseley did not draw attention to differences among the students. All of the students interacted and were seen as equals. In their lessons, staff tended to instill respect

for all.

Subjects

The subjects who participated in this investigation were non-handicapped individuals in grade four and grade six at Lord Roberts School, Polson School and Lord Wolseley School. A total of 124 subjects were used of whom 33 were grade four females, 32 were grade six females, 24 were grade four males and 35 were grade six males. (Table 1) There were originally 170 subjects who participated in the study; however data was rejected if one of the following conditions occurred.

- i) The subject was handicapped, Lord Roberts required all students (handicapped and non-handicapped) to complete the questionnaire; therefore, some of the data collected was not relevant to this study.
- ii) The subject had not been enrolled in the school for at least the present and preceeding school year.
- iii) The subject had incorrectly completed the answer sheet.

Table 1

Subjects

	Female		Male		Total
	Grade Four	Grade Six	Grade Four	Grade Six	
Lord Roberts	25	18	7	17	77
Polson	4	7	12	10	33
Lord Wolseley	4	7	5	8	24
Total	33	32	24	35	124

Testing Instrument

According to Fitz-Gibbon, Hennerson and Morris, (1978, p. 21)

Self-report procedures represent the most direct type of attitude assessment and should probably be employed unless you have reason to believe that the people whose attitudes you are investigating are unable or unwilling to provide necessary information.

The authors Goodwin and Driscoll (1980, p. 286) believe that "attitudes are typically inferred from one's behavior and direct measurement of attitudes is considerably more difficult than measurements of skills or cognitive knowledge."

The questionnaire administered in this investigation was The Peer Attitudes Toward the Handicapped Scale (PATHS). (See Appendix I). PATHS was designed by M.T. Bagley and J.F. Greene (Note 1) in 1981 to assess or measure the expressed attitudes of children to a variety of handicapping conditions.

PATHS is a thirty item questionnaire which consisted of three subscales. The subscales were designed to look at three handicapping conditions: physical, learning and behavioral. The physical handicaps, such as cerebral palsy or blindness, were usually easily observed. The learning handicap was defined as anything which makes it difficult for a child to learn. The behavioral handicap was defined as an emotional or psychological problem which may take the form of acting out. The items of the questionnaire covered a wide range of handicapping conditions which any individual may exhibit. The mentally handi-

capped individual may exhibit a variety of handicapping conditions such as a physical handicap, a learning problem and/or a behavioral problem.

A standardized sample of 756 subjects was used to analyze the validity and reliability of the PATHS Questionnaire. Internal consistency and stability over time were examined in PATHS. Bagley and Greene found reliability coefficients of .89 and .85 which were significant beyond the .001 level. (Note 1)

Validity of an instrument shows the extent to which the results measure what the testing instrument intends to measure. The logical and empiracle validity of PATHS were evaluated. Logical validity consists of face validity (the content of test items) and content validity (the items reflect what they propose to measure). There was evidence to support the logical validity of PATHS.

Empiracle validity was evaluated through a variety of statistical analyses of the standarized sample. Intercorrelations were high among subscales and total scale scores; construct validity was, therefore, established. Factorial analysis of the PATHS subscales was found to have factorial validity; student responses supported the hypothesized responses to the subscales of the instrument.

To determine stability over time, PATHS was administered to a group of 43 subjects. Four weeks later it was administered to the same group. The total scores coefficient was .74 and significant beyond the .001 level. PATHS appeared consistent and stable over

time (Bagley and Greene). (Note 1)

Compared to many ways of assessing individual attitudes (i.e. personal interview and sociometric ratings), the PATHS Questionnaire was considered a satisfactory reflection of an individual's attitudes. The subjects were not asked to rate their peers; therefore, the testing instrument was less subjective than other methods used to assess attitudes (Fitz-Gibbon, Hennerson & Morris, (1978). The scale covered a wide variety of handicapping conditions to which a child may be exposed. In addition, the questionnaire was brief, requiring approximately fifteen to thirty minutes to complete. The item descriptions were written at a grade four or lower reading level, and PATHS was applicable to students in grades four through eight. Finally, the questionnaire was not considered to be sexually biased.

Procedure

Questionnaire

Before this study was conducted, an application was completed requesting permission to use Lord Roberts as the integrated setting. The application was submitted to the Winnipeg School Division No. 1 Inter-University Review Committee. (See Appendix II) The principals of Polson and Lord Wolseley Schools were contacted following the directions of the Superintendent of River East School Division. Once permission was granted, the three principals were informed of the nature of this study. The teachers were then

informed of the study.

The proposal was submitted to and approved by the Ethics Review Committee, Faculty of Education, University of Manitoba.

The teachers from each of the classrooms were given letters of permission (See Appendix III) which were sent home to the parents of the subjects, signed and returned to the teacher. Appointments were made with the teachers as to when the questionnaire would be administered. All questionnaires were administered between 9:15 a.m. and 10:30 p.m. in an attempt to ensure a constant attention span across subjects.

The morning the questionnaire was administered, the teachers introduced the class to the researcher and asked the students to help in the completion of the questionnaire. Those students who had returned a letter denying their permission to take part in the study worked quietly at their desk on another activity. The researcher distributed the answer sheets (See Appendix IV) and explained that the answers were neither correct nor incorrect, and that the students were to answer according to what they felt was the best response. The students were asked to fill in their names, sex, age, grade and school in the appropriate areas of the answer sheet. It was explained that the one selected response should be circled. The possible choices were written on the board; the researcher then read and explained the possible choices. The researcher ex-

plained that the children described in each question were fictional.

The teacher read each question and allowed each student enough time to circle a response to the question. It was decided that the teacher should read through the questionnaire items to ensure the naturalness of the testing environment and to ensure that students would complete the questionnaire at approximately the same time. Students were assured that no one other than the researcher would know their answers. Once every student had completed the questionnaire, the researcher collected the answer sheets and thanked the students and the teacher for their cooperation.

Teacher Observations

At the time the questionnaire was administered, the teachers were given two questions to answer in writing regarding their perceptions of the quality of interactions and the attitudes of the children in their classroom toward handicapped children. (See Appendix V) The two questions were either collected during the follow-up visit or mailed to the researcher.

Follow-Up

Approximately one week following the visit in which the questionnaire was completed, the researcher made a follow-up visit to each of the classrooms. The purpose of the follow-up was an attempt to assess the reliability of student responses to

test items. The follow-up visit took the form of researcher - student interview.

Prior to the student interviews, the researcher randomly selected twenty percent of the students from each of the classrooms. The responses to the questionnaire subscales were considered. Two responses were selected from each subscale on the basis of a low attitude score (i.e. the described child should stay at home) or a discrepancy in responses which fell under the same subscale (i.e. the subscale of physical handicaps - one response was a low attitude score and one response with a high attitude score).

At the beginning of the interview, the researcher informed the student that he/she had been randomly selected from all the students in the classroom. During the interview, the student was asked to explain what he or she thought the researcher had been asking for in the questionnaire and how the student had felt about taking the questionnaire. In addition, those questions and responses which had been selected from the subscales were read to the student, and the student was given the opportunity to change the response, if so desired. The student was asked to explain the responses and give reasons why if, in fact, a response was changed. At the conclusion of the interview, the student was thanked for participating in the interview.

Data Analysis

The four independent variables of this study were sex, grade, educational setting and type of handicapping condition. The variables constituted a four factor design $2 \times 2 \times 3 \times 3$ (male, female \times grade four, grade six \times integrated setting, segregated setting, regular setting \times physical handicap, learning handicap, behavioral handicap). There were three between subject factors (sex, grade, setting) and one within subject factor (type of handicapping condition). A four factor repeated measures ANOVA (analysis of variance) was used to analyze the data. The data analysis was completed using BMDP (Biomedical P Series) to complete the ANOVA and SPSS (A Statistical Package for Social Sciences) was used to compute the T-tests.

The teacher observation forms were evaluated in terms of differences in the teachers' perceived attitudes and similarities of the teachers' perceived attitudes toward the children in their classrooms. The results of the interviews of the students were analyzed in terms of percentage changes (stability over time) for selected test items. The students' comments were also evaluated.

This investigation used questionnaires, interviews with children and teacher observations to assess the attitudes of non-handicapped children toward handicapped children. The statistical packages BMDP and SPSS were used to analyze the significance of

setting, grade, sex and type of handicapping condition on attitudes.

The following chapters will present and discuss in detail the data collected in this investigation. The results of the PATHS questionnaires, the student-researcher interviews and the teacher observation forms will be presented. The discussion will provide information regarding the attitudes of non-handicapped children toward handicapped children in the three educational settings.

CHAPTER 4

RESULTS

This investigation analyzed the effects of the variables sex, setting, grade and type of handicapping condition on the attitudes of non-handicapped children toward handicapped children. The data obtained from this study was analyzed using the BMDP (Biomedical P Series) statistical package. The SPSS (Statistical Package for Social Sciences) was used to calculate t-tests for all possible pairs of differences among the three 'type of handicap' means and for all possible pairs of differences among the three 'setting' means at each grade level. This chapter will discuss the significance of the results of this analysis.

Experimental Results

Analysis of Variance

i) Main Effects

A four factor repeated measures ANOVA (analysis of variance) was used to analyze the data obtained on the major variables of the study. Table 2 shows the analysis of the variables sex, setting, grade and type of handicapping condition.

As seen from Table 2 setting and sex variables were not statistically significant at the .05 level. Grade appears statistically significant at the .05 level ($F=21.83$, $df = 1/124$, $p > .05$). The type of handicapping condition or the within measures analysis

was statistically significant ($F = 157.25$, $df = 2/124$, $p > .05$).

To control for the violations attributed to repeated measures designs the Greenhouse Geisser Probability Level was used for the within measures analysis (Geisser & Greenhouse, 1958).

ii) Interactions

As seen from Table 2, the grade by setting interaction is statistically significant ($F = 5.73$, $df = 2/124$, $p > .05$). The table also indicates that, for the between measures, the following interactions were not statistically significant: grade by sex, sex by setting, grade by sex by setting. The following within measure interactions were not significant at the .05 level: handicapping condition by grade, handicapping condition by sex, handicapping condition by setting, handicapping condition by grade by sex, handicapping condition by grade by setting, handicapping condition by sex by setting and handicapping condition by grade, by sex by setting.

To find the significant mean differences of the grade factor, the means of the sex and setting factors were collapsed, and the means for each grade were compared. T-tests were used to analyze the grade by setting interaction and the type of handicapping condition interactions.

Table 2

ANOVA for Variables Sex, Setting
Grade and Type of Handicap

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Prob.	Greenhouse Geisser Prob.
Grade (G)	25.69338	1	25.69338	21.83	0.0000 *	
Sex	1.71860	1	1.71860	1.46	0.2295	
Setting	1.12724	2	0.56362	0.48	0.6208	
G/Sex	0.00162	1	0.00162	0.00	0.9705	
G/Set	13.48959	2	6.74479	5.73	0.0043 *	
Sex/Set	3.50455	2	1.75228	1.49	0.2301	
G/Sex/Set	1.07772	2	0.53886	0.46	0.6338	
ERROR	131.82789	112	1.17703			
Type of Handicap (H)	72.85582	2	36.42791	157.25		0.0 *
H/G	0.27697	2	0.13848	0.60		0.5504
H/Sex	0.85369	2	0.42684	1.84		0.1609
H/Set	1.99172	4	0.49793	2.15		0.0759
H/G/Sex	1.35686	2	0.67843	2.93		0.0557
H/G/Set	0.73236	4	0.18309	0.79		0.5321
H/Sex/Set	1.57652	4	0.39413	1.70		0.1508
H/G/Sex/Set	2.19774	4	0.54943	2.37		0.0535
ERROR	51.88955	224	0.23165			

*=significance, $p > .05$

G = Grade
Set = Setting
H = Type of Handicap

Test of Means

Grade: The means scores of Table 3 indicate that when sex and setting are collapsed there are statistically significant differences between the means of the non-handicapped children in grade four and grade six. Children in grade six regardless of sex, setting or type of handicapping condition were more positive in their attitude toward handicapped children than were the children in grade four (means = 3.5038 and 2.9998, respectively).

Table 3

Means for the Variables Sex, Setting,
Grade and Type of Handicap

		Four Female Int.	Four Female Seg.	Four Female Reg.	Four Male Int.	Four Male Seg.	Four Male Reg.
<u>Type of Handicap</u>							
PHYSICAL	1	3.76333	4.04167	3.458333	3.84524	3.24306	2.83333
LEARNING	2	3.20800	3.27500	3.02500	3.52857	2.94167	2.40000
BEHAVIORAL	3	2.36000	2.03125	1.96875	2.23214	2.53125	2.10000
MARGINAL		3.11044	3.11597	2.81736	2.20198	2.90532	2.44444
COUNT		25	4	4	7	12	5

		Six Female Int.	Six Female Seg.	Six Female Reg.	Six Male Int.	Six Male Seg.	Six Male Reg.	Marginal
PHYSICAL		4.12037	3.73810	4.59524	4.16667	3.97500	3.92708	3.85954
LEARNING		3.46667	3.32857	4.35714	3.41176	3.54000	3.78750	3.36532
BEHAVIORAL		2.71528	2.57143	3.73214	2.69118	2.61250	3.12500	2.59173
MARGINAL		3.43410	3.21270	4.22817	3.42320	3.37583	3.61319	3.27220
COUNT		18	7	7	17	10	8	124

Grade by Setting: To probe the significance of the grade by setting interaction, independent sample t - tests were computed for all possible pairs of differences among the three setting means at each grade level.

To control for the possibility of a Type I error at the .05 level, for each set of comparisons, a Turkey (1953) critical value based on a Welch solution for the degrees of freedom was adopted (Games & Howell, 1976). Table 4 contains the means, standard deviations, calculated t values, and the degrees of freedom for the grade four by setting contrasts. As seen from Table 4 the type of setting at the grade four level has an effect on the attitude of the non-handicapped children toward the handicapped children. There is a statistically significant difference in the attitudes of grade four students in the integrated setting and the grade four students in the regular school setting. The children in the integrated setting were more positive toward handicapped children than were the children in the regular setting. (means = 3.2271 and 2.6815, respectively + value = 3.05, $p > .05$).

Table 4 indicates no statistically significant differences in means between the integrated/segregated settings, and the segregated/regular settings at the grade four level. Table 4, however, indicates observed mean differences between settings. The grade four children in the integrated were more positive than grade four children in the segregated setting (means 3.2271 and 3.0271, respectively). In addition there were observed mean differences between grade four children in the segregated and regular settings. Children in the segregated setting were more positive toward their handicapped peers than were the children in the regular setting (means = 3.0271 and 2.6815, res-

pectively). At the grade four level children from the integrated setting were more positive than children in the segregated setting and children in the segregated setting were more positive than were the children in the regular school setting.

Table 4
Grade Four by Setting Interactions

Variable	Number of Cases	Mean	Standard Deviation	T Value	Degrees of Freedom
Integrated	32	3.2271	0.562	0.82	21.07
Segregated	16	3.0271	0.897		
Critical Value ± 2.52					
Integrated	32	3.2271	0.562	3.05	15.90
Regular	9	2.6815	0.447		
Critical Value ± 2.58					
Segregated	16	3.0271	0.897	1.28	22.82
Regular	9	2.6815	0.445		
Critical Value ± 2.53					

The grade by setting interaction was analyzed at the grade six level. Table 5 indicates that setting had no statistically significant effect on the attitudes of non-handicapped children toward handicapped children, at the grade six level. There were; however, observed mean differences. Grade six children regardless of sex or type of handicapping condition were not found to be significantly more positive toward handicapped peers in the integrated setting than in the segregated setting. The mean scores of grade six children in the regular setting were slightly higher than were those grade six children in the integrated setting (means = 3.9556 and 3.5248, respectively). Finally, grade six children in the regular setting had slightly higher mean

scores than the grade six children in the segregated setting (means = 3.9556 and 3.3941, respectively). The children from the regular setting had the highest mean score and the children from the integrated setting had a slightly higher mean score than the children from the segregated setting.

Table 5

Grade Six by Setting Interactions

Variable	Number of Cases	Mean	Standard Deviation	T Value	Degrees of Freedom
Integrated	35	3.5248	0.543	0.85	33.87
Segregated	17	3.3941	0.507		

Critical Value \pm 2.45					
Integrated	35	3.5248	0.543	- 1.97	20.27
Regular	15	3.9556	0.767		

Critical Value \pm 2.53					
Segregated	17	3.3941	0.507	- 2.41	23.77
Regular	15	3.9556	0.767		

Critical Value \pm 2.50					



iii) Type of Handicapping Condition: To probe the significance of the type of handicapping condition, main effect, dependent t - tests were computed for all possible pairs of differences among the three type of handicap means, that is learning, physical and behavioral. To control for the possibility of a Type I error at the probability level .05, a Bonferroni (Dunn, 1961) critical value was used. Table 6 contains the means, standard deviations, calculated t values, and degrees of freedom for the three pairwise contrasts. As seen from Table 6 regardless of setting, sex or grade the type of handicapping condition is statistically significant and therefore has an effect on the attitudes of children.

Children were more positive towards children described as having physical handicaps than to children with learning handicaps (means = 3.8595 and 3.3653, respectively, t-value = 8.28, a two-tailed Bonferroni critical value = ± 2.43). At the same critical value children were more positive toward children with physical handicaps than to children with behavioral handicaps (means = 3.8595 and 2.5917, respectively + value = 19.62). Finally, children with learning handicaps were viewed more positively than children with behavioral handicaps (mean = 3.3653 and 2.5917, respectively, + value = 12.20, a two-tailed Bonferroni critical value = ± 2.43). The t - tests indicated that children with physical handicaps were viewed significantly more positive than children with learning handicaps and children with behavior handicaps are viewed more

negatively than children with learning handicaps.

Table 6

Type of Handicapping Condition Effect

Variable	Number of Cases	Mean	Standard Deviations	T Value	Degrees of Freedom
Physical	124	3.8595	0.761	8.28	112
Learning		3.3653	0.822		
Physical	124	3.8595	0.761	19.62	112
Behaviorial		2.5917	0.818		
Learning	124	3.3653	0.822	12.20	112
Behavioral		2.5917	0.818		
Critical Value \pm 2.43					

Hypothesis One, Two and Three

Hypothesis one, two and three investigated the effect of setting on the attitudes of non-handicapped children toward non-handicapped children. It was hypothesized that i) there are differences in the attitudes toward handicapped children of those non-handicapped children in an integrated setting and those children in a regular setting when subscale scores and total scores of "PATHS" questionnaire are compared, ii) there are differences in the attitudes toward handicapped children of those non-handicapped children in a segregated setting and those children in a regular setting when subscale scores and total scores of "PATHS" questionnaire are compared, iii) there are differences in the attitudes toward handicapped children of those non-handicapped children in an integrated setting and those children in a segregated

setting when subscale scores and total scores of "PATHS" questionnaire are compared.

As seen from Table 2, setting was not found to be statistically significant; therefore, there were no significant mean differences in the attitude toward handicapped children attributed to setting ($F = 1.12724$, $df = 2/124$, $p > .05$). There were statistically significant differences in the attitudes of the children toward different handicapping conditions ($F = 157.25$, $df = 2/124$, $p > .05$). There were also no statistically significant interactions between type of handicapping condition and the type of setting; therefore the first three hypotheses was not supported ($F = 2.15$, $df = 4/124$, $p > .05$).

Hypothesis Four

It was hypothesized that there are differences in the attitudes toward handicapped children of non-handicapped females and non-handicapped males. As seen from Table 2, sex did not have a significant effect on the attitudes of the children ($F = 1.46$, $df = 1/124$, $p > .05$). There were no significant interactions between setting and sex ($F = 1.49$, $2/124 = df$, $p > .05$) and between grade and sex ($F = .00$, $df = 1/124$, $p > .05$). Finally, there was no significance between sex and type of handicapping condition ($F = 1.84$, $df = 2/124$, $p > .05$). The hypothesis that there are sex differences in childrens' attitudes toward handicapped children was not supported.

Hypothesis Five

It was hypothesized that there are differences in the attitudes

of grade four and grade six children toward handicapped children. The ANOVA indicated that grade was statistically significant (see table 2). A comparison of the grade four and grade six means, as seen in table 3, when collapsed over setting and sex, indicated that grade six students are more positive in their attitude toward handicapped children than students in grade four (means = 3.5038 and 2.9998, respectively, $p > .05$). The hypothesis that there are grade differences was supported.

Hypothesis Six

It was hypothesized that the teachers in the various settings will express observed differences in the attitudes of non-handicapped children toward handicapped children. The teacher observation questions were descriptively analyzed. Analysis of the teacher observation questions indicated that the teachers from the various settings perceived the attitudes and interactions of their non-handicapped students differently from each other. Those students from the integrated setting were perceived to be more positive in their interactions with handicapped children than were the students from the segregated or the regular setting. Students from the regular setting were perceived less positively than were those students from the segregated setting.

The quality of interactions as described by the teachers differed from setting to setting. Children from the regular school setting were

noted as occasionally staring and laughing at handicapped children and the boys tended to exclude handicapped children from extra-curricular activities. During classroom activities the children from the segregated setting were described as helpful and unaware of differences; however, outside of the classroom the interactions were not of the same quality, and as with those students from the regular setting, these students stared.

In the integrated setting the quality of interaction was viewed as positive both inside and outside the classroom. One teacher noted that the children became more accepting later in the year while another teacher noted that as the year progressed the non-handicapped children made less of an effort to get involved with the handicapped children. The sixth hypothesis was supported in that teacher observations differed across settings.

Follow Up

Twenty percent of the subjects were interviewed one week following the completion of the "PATHS" questionnaire. The purpose of the follow up visit was an attempt to assess the reliability of the testing instrument. The follow up visits were in the form of researcher - student interviews. During these interviews students were given the opportunity to explain what they believed to be the purpose of the questionnaire and to explain their answers to the test items. A total of twenty nine children were interviewed and asked why the question-

naire was administered to them. Twenty three or 79.3 percent of the students indicated an understanding as to what the "PATHS" questionnaire was about. Children generally responded that the questionnaire was in some way asking about handicapped persons, "teaching about handicapped people", "so we will learn about handicaps", "to teach other schools that disabled children should be in school". Five or 17.24 percent of the interviewed children could not give an explanation of the purpose of the questionnaire. One child interviewed offered an explanation which did not deal with handicaps. The child responded that the purpose of the questionnaire was, "to see if I would cooperate." In summary, the children appeared to understand what the questionnaire was.

A second part of the interview involved children explaining their responses to six test items and making changes if they desired. 714 questions were selected because of a low score or a low and high score within one subscale. Of the 174 questions discussed, 88.5 percent remained unchanged. Those responses that were changed were changed to a more positive response. The "PATHS" questionnaire was therefore considered to be reliable over time.

There were five possible responses the children could select which were i) in my group, ii) in another group, iii) in no group, iv) out of class and v) at home. The response indicating that the handicapped child could stay "at home" was generally selected if the

interviewed child felt that the mother would be better able to care for the handicapped child. When the handicapped child was better, the interviewed students suggested he or she would be able to return to school and possibly work "in my group". If a child was described as having behavior problems the child was chosen to stay "at home" until the child acted appropriately. A child tended to select "in my group" if he or she felt that the handicapped child could benefit from their assistance or help. The children generally placed behaviorally handicapped children in "no group" or "outside of class", because they did not want to work with someone who was bad. The response "in another group" was selected if the child felt the described handicapped child would benefit from a slower group. Children indicated that, when the handicapped child could act appropriately, was no longer sick or could perform academically as well as themselves, this child could then become a part of "my group".

Conclusion

The ANOVA and t-tests indicated that some of the hypothesis were supported. Grade was found to be statistically significant and a grade by setting comparison indicated that grade four students in the integrated setting were more positive toward handicapped peers than were children in the regular setting; the opposite was the case for grade six students. Overall, grade six students were found to be significantly more positive than grade four students. A pairwise

comparison of the type of handicapping condition main effect suggested that physically handicapped children were viewed more positively than learning disabled children and behaviorally handicapped children are viewed the least positively.

There were no statistically significant differences between male and females or between settings. The testing instrument was found to be reliable across time. Finally, there were differences in the teacher perceptions of their students' attitudes towards handicapped persons and their students' interactions with handicapped persons.

Chapter five will summarize and discuss the results and offer suggestions for further research. As well, possible implications of the study will be discussed.

CHAPTER 5

DISCUSSION

This study investigated the attitudes of non-handicapped children toward handicapped children in three educational settings at the grade four and the grade six level. The data analysis indicated that grade and type of handicapping condition had a statistically significant effect on the attitude of non-handicapped children toward handicapped children. By contrast the type of setting did not have a statistically significant effect; however, there were observed mean differences in attitude when a grade by setting comparison was made. The type of handicapping condition had significant effects on the attitudes of the non-handicapped children. Sex did not have a statistically significant effect on attitudes. In addition, the teachers from the various settings indicated observed differences in the attitudes and the interactions of the non-handicapped children with the handicapped children. The testing instrument, PATHS, was found to be reliable across time.

The following is a discussion of the results. The chapter discusses implications and offers suggestions for replication and further investigation.

Hypotheses One, Two and Three

Hypotheses one, two and three investigated the effects of setting on the attitudes of non-handicapped children toward handi-

capped children. The ANOVA indicated that there were no statistically significant differences in the attitudes of the students from the integrated, segregated or regular school settings regarding handicapped students. The small mean differences may be due to the small sample size. Sandberg(1982) found results similar to this investigation in that the attitudes of fourth, fifth and sixth grade children did not differ significantly across the two settings.

Dependent t - tests were used to probe the significance of the type of handicapping condition on the attitudes of the non-handicapped children. Three types of handicapping conditions were analyzed. The handicaps were physical, learning and behavioral. The analysis indicated that children with physical handicaps are viewed more positively than are children with learning disabilities. Children with learning disabilities are viewed more positively than are children with behavioral problems. These results are congruent with those of Wisely and Morgan (1981) who found that physically handicapped children were rated more positively on a social distance scale than mentally retarded children. These suggest that the type of handicap has an affect on the childs' attitude toward handicapped children. The question of why one child is accepted more than another child is important to consider. Gottlieb, Semmel, and Veldman (1978) found that the acceptance of EMR children was associated with their perceived academic ability and their perceived behavior.

Therefore, regardless of physical appearance or physical handicaps, if a child is perceived as academically competent and acts appropriately that child will likely be accepted among his or her peers. It appears then that children with learning difficulties and behavior problems would be viewed less positively than children with physical handicaps alone.

Hypothesis Four

Hypothesis four investigated the effect of sex on the attitudes of non-handicapped children toward handicapped children.

This investigation suggests that sex differences in the attitudes of non-handicapped children toward handicapped children were not statistically significant . The absence of a significant sex main effect was not surprising. Earlier research on attitudes toward handicapped person and sex differences tended to produce inconclusive results. Wilkens and Velicer (1980) and Wisely and Morgan (1981) found males to rate handicapped persons more positively than females. Sandberg, (1982) however, found females to be more accepting of TMR children than males while, Reese-Dukes and Stokes (1978) and G. Peterson (1974) found no statistically significant sex effect in their attitudinal research. In this investigation, the small sample size may have affected the significance of the sex difference findings.

Hypothesis Five

The fifth hypothesis investigated the differences between grade four and grade six non-handicapped children toward handicapped children.

The data analysis indicated that, regardless of sex, setting or type of handicapping condition grade six children are significantly more positive toward handicapped children than are children in grade four. This difference does not support Sandberg (1982) as Sandberg found that older children were less accepting than younger children. This investigation offers support to the studies by Wisely and Morgan (1981) in which grade three students were more negative than grade six students.

The result that older children are more accepting toward handicapped children than are younger children may be due to a variety of factors not covered within this investigation. For example, maturity and experience may influence the attitude. The notion that older children are more accepting and have a more positive attitude toward handicapped children is generalizable only to the grade six level. It is not evident that as children become older they become progressively more accepting although this may be worthy of further investigation.

The grade by setting interaction was found to be statistically significant. This means that the attitudes of the non-handicapped children were affected by setting depending upon the grade in which they were enrolled. For example, at the grade four level there were significant differences in attitudes of the non-handicapped children from the integrated and from the regular settings. Children from

the grade four integrated setting were more positive toward handicapped children than were the grade four children from the regular setting. This situation may be partly attributed to the programming which accompanied integration at the integrated school. [The philosophy at the regular school setting, Lord Wolseley, was not to draw attention to differences, while the philosophy at the integrated setting, Lord Roberts, was to discuss differences and through activities encourage interaction with the handicapped children.] Lord Roberts provided activities which would familiarize children with possible differences.

The existence of a more positive attitude in the integrated setting at the grade four level offers support for the contact hypothesis which suggests that the physical contact of non-handicapped and handicapped children will ensure positive acceptance of the handicapped children (Asher and Gottman, 1981). [The present finding suggests that physical contact integration does have a positive affect on attitudes toward handicapped children.] There were observed mean differences in the attitudes of grade four children in the integrated and segregated settings. These observed mean differences suggest further support for the contact hypothesis. In addition, those child-

ren from the segregated setting were more positive in their attitude toward handicapped children than the children from the regular setting. Though not statistically significant, these differences offer weak support for the contact hypothesis. Greater amounts of exposure and interaction with handicapped children will help foster a positive attitude toward handicapped children.

The grade by setting interaction at the grade six level did not produce similar results for there was no statistically significant effect of setting at the grade six level. This data does not clearly support either the contact hypothesis or the need for social integration. If the contact hypothesis or social integration were influential at this grade level some influence on the mean scores should have been noticeable. As it was, the small differences in means obtained were non-significant and consequently no conclusions in support of either the contact hypothesis or the need for social integration is possible.

The grade by setting analysis of this investigation indicated that, at the grade four level, integration may have a positive effect on the attitudes of non-handicapped children toward their handicapped peers. At the grade six level integration did not have such a positive affect. It may be necessary to supplement the integrated and segregated setting at the grade six level with greater social integration strategies.

Hypothesis Six

Hypothesis six investigated the observation of the teachers from the different setting.

The teachers from the various settings made observations about the attitudes of the children in their classrooms toward handicapped children and the quality of interactions when the non-handicapped interacted with the handicapped children. Those children from the integrated setting were observed to have a positive attitude toward their handicapped classmates and the quality of interaction was considered good. The children were "accepting, helpful, occasionally too helpful and not doting". This positive acceptance may be attributed to the planned activities and strategies developed in Lord Roberts School to help foster positive acceptance. For example, both teachers and students have the opportunity to go through simulation workshops, take part in group activities and discuss questions regarding various handicapping conditions. [The physical integration is accompanied by specific activities to encourage social integration.]

The quality of interaction between the handicapped and non-handicapped children at Polson School, the segregated setting, was also described as positive. The observations were not quite as positive as those made by the teachers from the integrated setting. Children interact positively during classtime; however, outside of the classroom the interaction is not quite as positive. The handi-

handicapped children at Polson School were often described as "the kids on the other side". The handicapped children are perceived as different, and this factor may explain the difference of attitude which exists during classtime and the attitude which exists on the playground.

The children from Lord Wolsely, the regular school setting, had little exposure to handicapped children. At the time of this investigation, there was one handicapped kindergarten student. The teachers observed that when the non-handicapped children were exposed to handicapped children, they might laugh or stare. Differences among children are not emphasized, and the non-handicapped children may be unfamiliar with handicapped children.

The teachers provided valuable information regarding how they perceive their students' attitude toward handicapped children.

(Teachers are in a position to influence and observe how children will accept handicapped children. They may be a strong influence in the child's attitude formation.) Cruickshank, Haring and Stern (1958) say that "the knowledge teachers have concerning exceptional children has a potential influence on the social and emotional adjustment of these children both in terms of the teacher-child interaction and in terms of the relationship between the exceptional child and the other children." (p.5)

Basis for Attitude Formation

The affect of the type of handicapping condition suggests that physically handicapped children are more positively accepted than children with learning or behavioral problems. During the follow-up visit, the children's explanations of their test item responses offered support for those views of Gottlieb, Semmel and Veldman (1978). For example, if the child described in a test item was able to perform or was perceived as performing academically well, that described child was selected to be in "my group"; however, if the child had a learning difficulty he or she would be asked to "stay at home" or remain "in another group" until his or her academic skills improved. In addition, those children described in "PATHS" who could not perform well athletically were generally placed "in another group" or "at home". These responses indicated that shared interests and academic accomplishment are important for acceptance. The importance of shared interests in ensuring the acceptance of handicapped children among non-handicapped peers was supported by a study conducted by Sipperstein and Chatillon (1982). Several of the children interviewed in this investigation mentioned that it was not the physical appearance of the handicapped child that influenced their attitude. Comments such as "it doesn't bother me what he looks like", were typical. Rather poor academic performance and misbehavior influenced their attitude toward the handicap-

péd child.

It appears that it is necessary to teach behaviors and skills to handicapped children which will ensure acceptance in conjunction with physical integration. The significant effect of the type of handicapping condition is not dissimilar to earlier research. Peterson and Harlick (1972) found that non-handicapped children tend to favour and select as their playmates like peers with similar abilities. The chances of a handicapped child being accepted among peers would be greater if that child exhibits similar behaviors as his or her peers.

Implications

Results of this study suggest that integration alone does not foster positive attitudes toward handicapped children. At the grade six level, children appear to be more positive than grade four children indicating that activities need to be developed for younger children in order to assist in the development of a positive attitude. The grade by setting analysis indicated that the integrated setting in some cases produces the most positive attitudes. It is necessary that physical integration must be accompanied by social integration.

Teachers need to introduce activities which will involve handicapped and non-handicapped children. In programming the teacher needs to incorporate activities which will allow children to share interests. Activities should encourage social integration and social acceptance. The following are suggestions which may help foster

a positive attitude toward the handicapped child: peer assisted learning, simulation training for both the teacher and student, group activities, discussion of handicapping conditions, co-operative learning situations, films and sociodramatic play.

Lippman (1972) suggests that changing the attitude of the child may not be enough to ensure the acceptance of handicapped individuals. Physical integration may not be enough. Lippman says:

"To meet adequately and appropriately the needs of the mentally retarded and other handicapped persons in our society calls for more than patch bandages, more than sympathy, more than 'charity' in the secular sense, more than tolerance and doles and favours and make - work. What it takes is a total revision of our societies' value system. Until we see the essential equality of every human being, until we acknowledge and act on each ones right to equal opportunity it's all mere rhetoric." (p.99)

Suggestions For Further Research

Replication of this study is warranted, but if this study were to be replicated, there are a few changes and additions to the study which would increase the value of this study. Firstly, a larger sample size would improve the generalizability of the results. One suggestion is that there be two schools representing each of the three settings instead of one. Secondly, sample sizes across variables should be as close to each other as possible, again to increase the generalizability. Thirdly, on the basis of the present study, it is not possible to conclude that older individuals are more accepting of handicapped individuals than are younger individuals;

therefore, it is suggested that a third, older grade be introduced in a follow up investigation. Fourthly, to ensure responses are correctly recorded on the answer sheet, an adapted answer sheet which requires the student to write out a response, as opposed to circling a response, is suggested.

There are some valuable questions to be considered in a second study. An examination of socioeconomic background of the children taking part in the study would be worth pursuing, as type of background may affect the child's attitude. A questionnaire administered to the parents may provide valuable information into the relationship between parental attitude and children's attitude formation. An examination of those factors such as which influence attitude formation would be of value.

Conclusion

The purpose of this investigation was to study the effect that sex, grade and setting and type of handicapping condition had on the attitude of non-handicapped children toward handicapped children.

There were non-significant findings regarding the effect of setting on the attitudes of non-handicapped children toward handicapped children. Grade six children are significantly more positive in their attitudes than are those children in grade four. Sex did

not have a significant effect on attitudes. Physically handicapped children were found to be viewed more positively than were learning disabled children and behaviorally disabled children were viewed less positively than learning disabled children.

Though the significance of a setting influence on attitude formation is not present, a grade by setting comparison indicated that there are in fact differences in attitudes depending on the grade of the child and the setting in which the child is a part. The teacher observations support the observed mean differences of the setting effect. There is a need for physical integration of non-handicapped and handicapped children as it often produces a more accepting environment; however, it is clear that physical integration is not enough. Social integration must also take place. The teacher needs to plan activities which will encourage social acceptance of handicapped individuals and help foster a positive attitude toward handicapped individuals.

Reference Notes

1. Bagley, M.T. and Greene, J.F., Peer Attitudes Toward the Handicapped Scale. Texas, Pro-Ed Services for Professional Educators, 1981.
2. Ludlow, B.L., Examining Young Children's Perceptions of Handicaps. West Virginia, 1981, ED 215756.
3. Wong, N. and Perkins, S. Attitudes toward the Mentally Retarded, a Review of Selected Literature. Scotland, 1978, ED 158486.
4. Winnipeg School Division No. 1. Open Doors: Activities for the Classroom, Winnipeg, The Division, 1979.
5. The Network. Kids Accepted Here, Activities for the Classroom. Massachusetts, Network of Innovative Schools, 1977.

References

- Apolloni, T. & Cooke, T. Developing positive social-emotional behaviors: a study of training and generalizing effect. Journal of Applied Behavior Analysis. 1976. Vol. 9, no. 1, 65-78.
- Apolloni, T. & Cooke, S. & Cooke, T. Normal preschool children as behavioral models for retarded peers. Exceptional Children. 1977, Vol. 43, no. 8, 531-32.
- Apolloni, T. , Cooke, S. & Cooke, T. Establishing a normal peer as a behavioral model for developmentally delayed toddlers. Perceptual and Motor Skills, 1977, Vol. 44, 231-241.
- Apolloni, T., Cooke, T. & Snyder, L. Integrated Setting at the early childhood level: the role of non-retarded peers, 1977, Exceptional Children. Vol. 43, no. 42, 262-316.
- Asher, S. R. & Gottman, J. The Development of Children's Friendship, New York, Cambridge University Press, 1981.
- Ballard, M., Corman, L., Gottlieb, J., & Kaufman, M. Improving the social status of mainstreamed retarded children. Journal of Educational Psychology, 1977, Vol. 69, no. 5, 605-611.
- Bruininks, R. H., Gross, J. C. & Rynders, J. E. Social acceptance of mildly retarded pupils in resource rooms and regular classes. American Journal of Mental Deficiency, 1974, Vol. 78, no. 4, 377-383.
- Budoff, M. & Sipperstein, C.N. Low-income children's attitudes toward mentally retarded children: effects of labelling and academic behavior. American Journal of Mental Deficiency, 1979, Vol. 82, no. 3, 474-479.
- Cavallaro, S. A. & Porter, R. H. Peer preferences of at-risk and normally developing children in a preschool mainstream classroom. American Journal of Mental Deficiency, 1980, Vol. 84, no. 4, 357-366.
- Clark, E. T. Children's perception of educable mentally retarded children. American Journal of Mental Deficiency, 1964, Vol. 68, no. 5, 602-611.

- Cohen, S. & Levitt, E. Attitudes of children toward their handicapped peers. Childhood Education, 1976, Vol. 52, no. 3, 171-173.
- Cohen, S. Improving attitudes toward the handicapped. Education Forum, 1977, Vol. 42, no. 1, 9-20.
- Cook, J. & Wollersheim, J. The effects of labelling of special education students on the perceptions of contact versus non-contact with normal peers. Journal of Special Education, 1976, Vol. 10, no. 2, 187-198.
- Cruickshank, W., Haring, N. & Stern, G. Attitudes of Educators Toward Exceptional Children. New York, Syracuse University Press, 1958.
- Dunn, O. J. Multiple comparisons among means. Journal of the American statistical Association, 1961, Vol. 56, 52-64.
- Dyer, J. R. Understanding and Evaluating Educational Research. California, Addison-Wesley, 1979.
- Fitz-Gibbon, C., Hennerson, M. & Morris, M. How to Measure Attitudes, Los Angeles, Sage Publications, 1978.
- Frith, G. H. & Mitchell, J. W. The attitude of non-handicapped students toward the mildly retarded: a consideration in placement decisions. Education and Training of Mentally Retarded, 1981, Vol. 16, no. 4, 79-83.
- Games, P. A. & Howell, J. F. Pairwise multiple comparison procedures with unequal n 's and/or variances: A Monte Carlo Study. Journal of Educational Statistics, 1976, Vol. 1, 113-125.
- Geisser, S. & Greenhouse, S. W. An extension of Box's results on the use of the F distribution in multivariate analysis. Annals of Mathematical Statistics, 1958, Vol. 29, 885-891.
- Goodwin, W. L. & Driscoll, L. Handbook of Measurement: Evaluation in Early Childhood Education, San Francisco, Jossey-Bass Publications, 1980.
- Gottlieb, J. Attitudes toward retarded children: effects of labeling and behavioral aggressiveness. Journal of Educational Psychology, 1975, Vol. 69, no. 5, 605-611.

- Gottlieb, J. & Gottlieb, B. Stereotypic attitudes and behavioral intentions toward handicapped children. American Journal of Mental Deficiency, 1977, Vol. 82, no. 1, 65-71.
- Gottlieb, J. & Leyser, Y. Improving social status of rejected pupils, Exceptional Children, 1980, Vol. 46, no. 6, 459-461.
- Gottlieb, J., Semmel, M. & Veldman, J. Correlates of social status among mainstreamed mentally retarded children. Journal of Educational Psychology, 1978, Vol. 70, no. 3, 396-405.
- Gresham, F., Misguided mainstreaming: the case for social skills training with handicapped children, Exceptional Children, 1982, Vol. 48, no. 5, 422-431.
- Guralnick, M. J. The value of integrating handicapped and non-handicapped preschool children. American Journal of Orthopsychiatry, 1976, Vol. 46, no. 2, 236-245.
- Guralnick, M. J. (ed.) Early Intervention and the Integration of Handicapped and Non-Handicapped Children. Baltimore, University Park Press, 1979.
- Guralnick, M. J. Social interactions among preschool children. Exceptional Children, 1980, Vol. 46, no. 4, 248-253.
- Harrington, R. M. & Randolph, A. H. Fifth graders projected responses to a physically handicapped classmate. Elementary School Guidance Counselling, 1981, Vol. 16, no. 1, 31-35.
- Iano, R., Ayers, D., Heller, H., McGettigan, J. & Walker, J. V., Sociometric status of retarded children in an integrative program. Exceptional Children, 1974, Vol. 40, no. 4, 267-271.
- Lippman, L. D. Attitudes Toward the Handicapped: A Comparison Between Europe and United States. Illinois, Charles C. Merrill Publisher, 1972.
- McHale, S. M. & Semeonsson, R. J. Effects of interaction on non-handicapped children's attitudes toward autistic children. American Journal of Mental Deficiency, 1980, Vol. 85, no. 1, 18-24.

- Parish, T. S., Ohlsen, R. L. & Parish, J. G., A look at mainstreaming in light of children's attitudes toward the handicapped. Perceptual and Motor Skills, 1978, Vol. 46, 1019-1021.
- Peterson, G. F. Factors related to the attitudes of non-retarded children toward their EMR peers. American Journal of Mental Deficiency, 1974, Vol. 19, no. 4, 412-416.
- Peterson, N. & Haralick, J. Integration of handicapped and non-handicapped preschoolers: an analysis of play behavior and social interaction. Education and Training of the Mentally Retarded, 1972, Vol. 12, no. 3, 235-245.
- Peterson, N. Social integration of handicapped and non-handicapped preschoolers: A study of playmate preferences. Topics in Early Childhood Special Education, 1982, Vol. 2, no. 1, 31-35.
- Raver, S. A. Preschool integrational experience from the classroom. Teaching Exceptional Children, 1979, Vol. 12, no. 1, 22-26.
- Reese-Dukes, J. L. & Stokes, E. H. Social acceptance of elementary educable mentally retarded pupils in the regular classroom. Education and Training of the Mentally Retarded, 1978, Vol. 13, no. 3, 356-361.
- Sandberg, L. D. Attitudes of non-handicapped elementary school students toward school-aged trainable mentally retarded students. Education and Training of the Mentally Retarded, 1982, Vol. 17, no. 1, 30-34.
- Sheare, J. B. Social acceptance of EMR adolescents in integrated programs. American Journal of Mental Deficiency, 1974, Vol. 78, no. 6, 678-682.
- Sipperstein, G. N. & Chatillon, A. C. Importance of perceived similarity in improving children's attitudes towards mentally retarded peers. American Journal of Mental Deficiency, 1982, Vol. 86, no. 2, 453-458.
- Strauch, J. D. Social contact as a variable in the expressed attitudes of normal adolescents toward EMR pupils. Exceptional Children, 1970, Vol. 36, no. 7, 495-500.

Thurman, K. & Lewis, M. Children's response to differences: some possible implications for mainstreaming. Exceptional Children, 1979, Vol. 45, no. 6, 468-470.

Turkey, J. W. The Problem of Multiple Comparisons. Unpublished manuscript, Princeton University, 1953.

Welch, B. L. The generalization of Student's problem when several different population variances are involved. Biometrika, 1947, Vol. 34, 28-35.

Wilkins, J. E. & Velicer, W. F. A semantic differential investigation of children's attitudes toward three stigmatized groups. Psychology in the Schools, 1980, Vol. 17, no. 3, 364-371.

Wisely, D. W. & Morgan, S. B. Children's ratings of peers presented as mentally retarded and physically handicapped. American Journal of Mental Deficiency, 1981, Vol. 86, no. 3, 281-286.

APPENDIX I

PATHS STUDENT BOOKLET

DIRECTIONS

Please read the Student Descriptions that follow. Read about the student and decide how you *feel* about him/her. Then select or place this student where he or she should work. You have five choices:

- 5 Work with me in *My Group*
- 4. Work in *Another Group* (with someone else)
- 3 Work in *No Group* (with no other students)
- 2 Work *Outside of Class* (in another class or room)
- 1 *Stay at Home* (and not come to school)

IMPORTANT: *On the Answer Sheet circle the number that best describes how you feel or where you think that student should work. Read each statement carefully. There are 30 student descriptions.*

STUDENT DESCRIPTIONS

ITEMS

1. Stephen cannot follow directions, and his teacher must tell him at least three times what to do; even then Stephen might still not know what to do. He is unable to do the class work and is failing every subject.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

2. Anna has a hard time breathing. She always sounds like she is choking. Despite her difficulty, Anna is a good student.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

© Copyright 1981 by Michael Bagley and John Greene

Additional copies of this booklet are available from:
PRO-ED, 333 Perry Brooks Building, Austin, Texas 78701

3. Jimmy is crippled and needs to sit in a special wheel chair in class. He's smart and learns all the work. Jimmy has trouble moving around and needs special help.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

4. Ryan has problems with math. He uses his fingers for adding numbers and does not remember his facts. He never finishes his math assignments.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

5. Kathy always interrupts her class by calling out, teasing and demanding the teacher's attention. She is always getting out of her seat and going to the teacher's desk. She lies, cheats, and does not make friends.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

6. Sally is having a very difficult time in school. She cries, bangs her head on the desk, and falls off her seat. She blacks out sometimes and doesn't know where she is.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

7. Sharon can't remember what she reads and this makes her upset. After Sharon reads aloud, the teacher will ask her several questions about the story. Sharon just forgets what she reads. She has a poor memory.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

8. Jeff's writing is very poor for a boy in the sixth grade. It is hard to understand because there are so many mistakes. His writing is sloppy, and his choice of words is often inappropriate.

This student should work:

In my Group	In Another Group	In no Group	Outside of Class	At Home
5	4	3	2	1



9. Peggy is cross-eyed. She doesn't like to talk to others in the class and dislikes working in small groups with her teacher.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

10. Michael is partially deaf in both ears. He wears a hearing aid and has difficulty saying words. His speech sounds different. This makes him hard to understand.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

11. Dick is an excellent ball player. He gets along with his classmates but is unable to read any of his class material. As a result he has failed all the tests. This has upset him very much.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

12. Julie has only one arm because of a serious auto accident. She is working below other students and has difficulty writing and completing classroom assignments.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

13. Lee learns very slowly. His teacher has to repeat everything or Lee will just not do anything. He loses his place in reading and doesn't do homework.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

14. Mary is a third grader and can't read or spell very well. She sees things backwards and sometimes up-side down. When she is asked to read or spell, she gets upset and usually sits at her desk and scribbles.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1



15. John has great difficulty seeing. He is partially blind and unable to read from the blackboard. He is only able to read books with very large print. John wears a patch over his bad eye.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

16. Jill likes school and works hard but has great difficulty holding pencils or pens due to a muscle problem resulting from a serious illness. Jill can read but finds writing almost impossible to do.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

17. Steve is a poor learner and is failing all subjects in his class. He always disrupts the class and acts bad to his teachers.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

18. Jose is very smart but is always complaining about his parents. It seems they beat him and push him away, or send him to his room. In class Jose is always "showing off" and wants to take over.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

19. When Amy does math she takes much longer than everyone else. When she is told to add, she subtracts; when she is told to subtract, she adds. She does not understand math signs and cannot follow directions.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

20. Peter does not do what his teacher wants, which generally results in Peter being sent from the room. He always argues with his teacher, causing the class to become very upset.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1



21. Mary is a very poor reader and can only read a few words. She does little homework and doesn't like school.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

22. Carol Lee is very shy and has a speaking problem which she cannot help. She stutters on almost every sentence, making it difficult to listen to her.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

23. Sam is a poor student and slows the teacher's lesson. This holds back the class. He either stands off to the side or pushes everyone away, using loud and rough talk.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

24. Maria learns very slowly and needs to have instructions repeated several times. Even then she may not be able to do the work.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

25. Jim looks different because his head is very large. It makes his eyes and ears look different. He is clumsy and stumbles a lot. He spoils the team he is on in gym.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

26. Benny walks different because one of his feet is bigger than the other and is twisted. He limps badly, and has the name "Limpy".

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1



27. Peter doesn't like school. He is always late in the morning. When he is at his desk, he is always moving around, dropping things and making noise. He disturbs everyone and usually is punished by his teacher.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

28. Bill talks all the time. Everyone must do what he says. If they don't, he bites, scratches, kicks and punches. Then he goes into a rage.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

29. Linda has a bad scar from the top to the bottom of her lip which pulls her mouth crooked. When she talks it is hard to understand because it sounds like she is talking through her nose.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

30. Greg is absent from school all the time and has difficulty breathing on certain days. He is always visiting the nurse's office for pills. Greg is very skinny.

This student should work:

In My Group	In Another Group	In No Group	Outside of Class	At Home
5	4	3	2	1

STOP!

APPENDIX II

REQUEST FOR SCHOOL RESEARCH SAMPLE

Date December 7, 1982

Attitudes of Non-Handicapped
 Name of Project Children toward Handicapped
 Children
 Name of Experimenter(s) Pamela Klein

Reason for Study

- () Faculty Research
 () Ph.D. Dissertation
 () Predoctoral Research
 (x) Master's Thesis Research
 () Undergraduate Student
 Research (Year 1 2 3 4)**
 () Other (explain) _____

**Circle appropriate year

Proposed Research Sample(s)

- Schools: () Pre-School
 (x) Elementary
 () Jr. High School
 () Sr. High School

Indicate School(s) of preference:

Lord Roberts School

Other groups (agency, institution,
 organization, etc. you intend to
 contact:

St. James-Assiniboia school DivisionNo. 2 (selection of segregated and
 regular school)

I. Research Proposal:

A. Title and design of study, including hypotheses, description of procedures,
 task(s): (Continue on back of this sheet.) (Attach a copy of the questionnaire
 or test if one is being used.)

The Attitudes of Non-handicapped Children toward
 Handicapped Children in Three Educational Settings

Research has been conducted in reference to integration and the attitudes of non-handicapped children toward handicapped children. The research suggests that exposure to handicapped children does not necessarily insure that positive attitudes and positive social interactions will result. It is important to be aware of the attitudes of young children. If negative attitudes exist it is the responsibility of the educator to help foster the development of positive social interactions and positive attitudes.

The purpose of this study is to investigate the attitudes of non-handicapped children toward handicapped children in an integrated school setting, a segregated school setting and a regular school setting. An integrated school setting is on in

(over)

which handicapped children and non-handicapped children are in the same classrooms. A segregated school setting is one in which classes of handicapped children are within the same school as non-handicapped children however the integration between the two groups is minimal. A regular school setting is one in which there are no handicapped children in the school. Handicapped individuals are those children with a variety of handicapping conditions (ie. mental handicaps, physical handicaps, behavioral and learning difficulties).

Hypothesis: There are differences in attitudes of non-handicapped children toward handicapped children depending on the amount of exposure to handicapped children in the school setting.

A questionnaire will be administered to the male and female grade four students in one of each of the identified school settings. The "Peer Attitudes Toward the Handicapped Scale" (inclosed) was designed by M.T. Bagley and J.F. Greene. PATHS attempts to measure the expressed attitudes of children to a variety of handicapping conditions.

Procedure: A thirty item questionnaire (PATHS) will be administered to male and female grade four children. The children will be from an integrated setting or a segregated setting or a regular setting. The questionnaire will take approximately fifteen minutes to complete and will be administered in a classroom in their school. The children will be asked to read a brief vignette of a handicapped child and will be asked to circle the numbered response which best describes where they feel the handicapped child should be placed.

The results of this research project will be of value to those persons who are concerned with maximizing the benefits of integration and developing positive attitudes toward handicapped individuals. The success of integration and the positive acceptance of handicapped individuals in the community will depend on the awareness of attitudes toward the handicapped and an attempt to foster the development of positive attitudes in young children.

- B. Type of response required of child: The child will be asked to circle a numbered response which best describes his feelings as to where the described child should be placed.
- C. Reward, if any: The children will be thanked for answering the questionnaire and for co-operating.

II. Subjects:

- A. Children needed: Number all grade 4's Age _____ Sex male and female
- B. Special Characteristics: Non-handicapped children who are integrated with handicapped children.
- C. Number of sessions per child: _____ one.

Approximate length of each session: Fifteen to thirty minutes

Testing Procedure: individual _____ group x
size of group _____

III. Sample Characteristics:

(Indicate below whether a random sample of classes or schools is necessary or if a stratified sample is required).

Lord Roberts School was selected as the only integrated school setting in Winnipeg (a sample of the only such school available). All of the grade four students within this sample will be administered the questionnaire.

The same procedure was used in the selection of the segregated school setting.

The regular school was randomly selected from all of the regular elementary schools in Winnipeg School Divisions No. 1 and No. 2.

IV. Facilities and equipment:

(Indicate facilities needed and equipment to be used that must be obtained from the school).

It is important to administer the questionnaire in an environment which is familiar to the subjects therefore the questionnaire will be administered in a classroom within the school.

All materials needed to complete the questionnaire will be provided by the researcher.

V. Persons conducting research:

NAME	UNIVERSITY	TELEPHONE
<u>Pamela F. Klein</u>	<u>University of Manitoba</u>	<u>475-4068</u>
_____	_____	_____
_____	_____	_____

- The child will be asked to circle a numbered response which best describes his feelings as to where the described child should be placed.
- B. Type of response required of child: ~~response which best describes his feelings as to where the described child should be placed.~~
- C. Reward, if any: ~~The children will be thanked for answering the questionnaire and for co-operating.~~

II. Subjects:

- A. Children needed: Number all grade 4's Age _____ Sex male and female
- B. Special Characteristics: Non-handicapped children who are integrated with handicapped children.
- C. Number of sessions per child: _____ one.

Approximate length of each session: Fifteen to thirty minutes

Testing Procedure: individual _____ group x
size of group _____

III. Sample Characteristics:

(Indicate below whether a random sample of classes or schools is necessary or if a stratified sample is required).

Lord Roberts School was selected as the only integrated school setting in Winnipeg (a sample of the only such school available). All of the grade four students within this sample will be administered the questionnaire.

The same procedure was used in the selection of the segregated school setting.

The regular school was randomly selected from all of the regular elementary schools in Winnipeg School Divisions No. 1 and No. 2.

IV. Facilities and equipment:

(Indicate facilities needed and equipment to be used that must be obtained from the school).

It is important to administer the questionnaire in an environment which is familiar to the subjects therefore the questionnaire will be administered in a classroom within the school.

All materials needed to complete the questionnaire will be provided by the researcher.

V. Persons conducting research:

NAME	UNIVERSITY	TELEPHONE
<u>Pamela F. Klein</u>	<u>University of Manitoba</u>	<u>475-4068</u>
_____	_____	_____
_____	_____	_____

Beginning Date of research: November 1982 Anticipate completion: April 1983

I. Supervisor (for student projects)

I have reviewed this proposal and find it ethically sound and will take the responsibility of supervising this work to its completion.

Signed: _____

Address: _____

Phone Number: _____

II. For university based projects a statement from the appropriate ethical review committee should be attached.

APPENDIX III

Dear Parents:

In order to learn more about the social interactions between handicapped children and non-handicapped children it is important to determine the attitudes of non-handicapped children toward handicapped children. With a better awareness of children's attitudes toward handicapped children we are better equipped to help foster the development of positive attitudes and positive social interactions.

The purpose of this letter is to request your permission to allow your son or daughter to participate in such an investigation.

The study is designed to assess children's attitudes toward handicapped individuals. Your child will be asked to read a brief description of a handicapped individual and will then be asked to circle a numbered response which best describes where the handicapped child should be placed.

Sample question: Jill likes school and works hard but has great difficulty holding pencils or pens due to a muscle problem resulting from a serious illness. Jill can read but finds writing almost impossible to do. This student should work.

In My Group	In Another Group	In No Group	Outside The Class	At Home
5	4	3	2	1

The information obtained from this study will be treated in a confidential manner. Please feel free to contact Pamela Klein at 474-4068 if you have any questions.

This study has been approved by the school principal, the School Division and the Interuniversity Research Review Committee.

Please indicate whether or not you wish your son or daughter to participate by completing the permission slip and returning it to the school.

Yours Sincerely,

Pamela Klein (Ph.# 475-4068)
Dr. J. Hughes (Supervisor)
(Ph.# 474-9023)

Permission Form

Name of child _____

I do consent to let my child participate _____

I do not consent to let my child participate _____

Parent's Signature _____

APPENDIX IV

PATHS ANSWER SHEET

Item #	In My Group	In Another Group	In No Group	Out of Class	At Home	STUDENTS. PLEASE DO NOT WRITE IN SHADED AREA.		
	5	4	3	2	1	P	L	B
1	5	4	3	2	1		<input type="radio"/>	
2	5	4	3	2	1	<input type="radio"/>		
3	5	4	3	2	1	<input type="radio"/>		
4	5	4	3	2	1		<input type="radio"/>	
5	5	4	3	2	1			<input type="radio"/>
6	5	4	3	2	1			<input type="radio"/>
7	5	4	3	2	1		<input type="radio"/>	
8	5	4	3	2	1		<input type="radio"/>	
9	5	4	3	2	1	<input type="radio"/>		
10	5	4	3	2	1	<input type="radio"/>		
11	5	4	3	2	1		<input type="radio"/>	
12	5	4	3	2	1	<input type="radio"/>		
13	5	4	3	2	1		<input type="radio"/>	
14	5	4	3	2	1		<input type="radio"/>	
15	5	4	3	2	1	<input type="radio"/>		
16	5	4	3	2	1	<input type="radio"/>		
17	5	4	3	2	1			<input type="radio"/>
18	5	4	3	2	1		<input type="radio"/>	<input type="radio"/>
19	5	4	3	2	1			<input type="radio"/>
20	5	4	3	2	1		<input type="radio"/>	
21	5	4	3	2	1		<input type="radio"/>	
22	5	4	3	2	1	<input type="radio"/>		
23	5	4	3	2	1			<input type="radio"/>
24	5	4	3	2	1		<input type="radio"/>	
25	5	4	3	2	1	<input type="radio"/>		
26	5	4	3	2	1	<input type="radio"/>		
27	5	4	3	2	1			<input type="radio"/>
28	5	4	3	2	1			<input type="radio"/>
29	5	4	3	2	1	<input type="radio"/>		
30	5	4	3	2	1	<input type="radio"/>		
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						P	L	B
						<input type="checkbox"/>	TOTAL	
						(Raw Score)		

PATHS: PROFILE AND RECORD FORM

Profile Chart for _____
(name)

Date Tested _____ Age _____

School _____ Grade _____

Section A
PATHS SUBSCALES

Subscales	Raw Score	NCE	Percentile
Physical	_____	_____	_____
Learning	_____	_____	_____
Behavioral	_____	_____	_____
TOTAL	_____	_____	_____

Section B
PATHS PROFILE
Subscales

NCE	Physical	Learning	Behavioral	Total	NCE
99	•	•	•	•	99
95	•	•	•	•	95
90	•	•	•	•	90
85	•	•	•	•	85
80	•	•	•	•	80
75	•	•	•	•	75
71	•	•	•	•	71
70	•	•	•	•	70
65	•	•	•	•	65
60	•	•	•	•	60
55	•	•	•	•	55
50	•	•	•	•	50
45	•	•	•	•	45
40	•	•	•	•	40
35	•	•	•	•	35
30	•	•	•	•	30
29	•	•	•	•	29
25	•	•	•	•	25
20	•	•	•	•	20
15	•	•	•	•	15
10	•	•	•	•	10
5	•	•	•	•	5
1	•	•	•	•	1

APPENDIX V

Teacher Observation

Name _____

School _____

Grade Taught _____

What do you perceive the attitudes of the children in your classroom to be toward handicapped individuals?

When interaction between the children in your classroom and handicapped children takes place what is the quality of these interactions?