THE DEGREE OF CHANGE IN THE SOCIOMETRIC STATUS OF INTERMEDIATE EDUCABLE MENTALLY RETARDED CHILDREN WHO WERE PLACED IN THE REGULAR CLASSROOM

BY

HENRY BRANSON DARKE, JR.

THE DEGREE OF CHANGE IN THE SOCIOMETRIC STATUS OF INTERMEDIATE EDUCABLE MENTALLY RETARDED CHILDREN WHO WERE PLACED IN THE REGULAR CLASSROOM

A Research Paper

Presented to

the Graduate Council of

Austin Peay State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

in Education

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by

Henry Branson Darke, Jr.

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To the Graduate Council:

I am submitting herewith a Research Paper written by Henry Branson Darke, Jr. entitled "The Degree of Change in the Sociometric Status of Educable Mentally Retarded Children Who Were Placed in the Regular Classroom." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts in Education, with a major in Guidance and Counseling.

Elizabeth H. Stokes
Major Professor

Accepted for the Council:

Wayne E. Stumpf
Dean of the Graduate School

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CHAPTER I

Although each individual had been guaranteed the right to receive an equal education, the American system of education had not, until recently, recognized that each individual did not possess an equal capacity to learn. For most of our nation's history, children who were mentally handicapped were put into classes with typical children, if, indeed, they were allowed in the schools at all. However, the physical placement of these children into the regular classroom did not provide an equal degree of the opportunities for learning which the regular students received.

Despite the fact that the first class organized solely for the mentally handicapped was established in 1896, the growth of these special classes might be compared to the pace of a snail. Fortunately, during the last twenty-five years American education has awakened to the needs of the mentally handicapped.

One of the original and ongoing concerns is the way in which the mentally handicapped, as a group, are looked upon by the rest of American society. The degree of social acceptance has long been of concern to parents, teachers, and professional educational administrators and researchers. It has apparently been the practice to simply establish the special classes without giving adequate consideration to the effects of special class placement on the social relationships of the children involved. As a result, many of the classes have tended, however unintentionally, to foster social ostracization. For example, special education classes were variously placed "down at the end of the hall,"

"down in the basement," "upstairs--away from the main flow of traffic," or "out in the portable classroom." Thus it was not surprising that there is little social contact between the mentally handicapped and the normal children. This lack of contact might be considered a contributing factor to the acceptance of stereotypes of the mentally handicapped by the normal children, describing them as "smelly," "mean," "rough," "bullies," "eddies," "retardo," "bad sports," or the like.

It has been asserted that the personality variables which are so very dependent on social acceptance, or, at least, an individual's perception of it, play a vital role in the degree to which all children, not only the mentally handicapped, utilize their maximum intellectual ability. For this reason, it is believed that the educational environment in which the mentally handicapped are placed should be one which is structured to encourage social, as well as academic, participation with regular class age mates. It has been pointed out repeatedly by investigators that increased social contact tends to increase social acceptance and thereby enhances self-concept.

Purpose of the Investigation

In the summer of 1972 the school board of the Clarksville-Montgomery County (Tennessee) Unified School System changed its policy in regard to the placement of educable mentally retarded students. Prior to the 1971-1972 school year, all of these children were in self-contained classrooms located either within the regular school building or in an adjacent building in the immediate area. In the 1970-1971 school year the special education students were placed back into the regular classroom on an experimental basis in three elementary schools. They received special help in mathematics and reading from the resource teacher for two periods a day, but remained in the regular classroom for their other subjects.

For years, beginning with the classic work of Johnson (1950), research has indicated that the mentally retarded in the regular classroom were rejected socially, despite their physical presence. Many people decided to stop at this point in Johnson's research and began to proclaim the virtues of special classes which would be segregated from the regular classrooms. However, for various reasons, this policy has not always been satisfactory either. This was the apparent situation in the Clarksville-Montgomery County area at the time of this investigation.

The purpose of this investigation was to determine if the placement of educable mentally retarded students in the regular classroom would be instrumental in improving their social acceptance. Social acceptance was measured by the administration of a sociometric instrument near the beginning of the first year of placement in the regular classroom and again near the end of the first year of placement, approximately seven months apart.

Hypotheses

The following hypotheses were formulated to guide the investigation and were analyzed statistically for validity:

1. There is no significant difference in the measured sociometric status of the regular class children as compared to the EMR children at the beginning of the year.

2. There is no significant difference in the measured sociometric status of the regular class children as compared to the EMR children at the end of the year.

3. There is no significant difference in the change of the sociometric status of the EMR children between pre- and post-testing.

4. There is no significant difference in the change of the sociometric status of the regular class children between pre- and post-testing.

Definition of Terms

Educable Mentally Retarded

An individual whose measured intelligence quotient is between 50 and 75. From this point in the investigation, this type of individual will be referred to as an "EMR."

Intermediate Educable Mentally Retarded

An EMR whose chronological age is ten to fifteen years.

Resource Teacher

A teacher who is certified in methods of teaching special education but who does not have a homeroom of children classified as EMR; instead, she instructs these children for two periods each school day, primarily in mathematics and reading, while they are members of a regular class for the remainder of the day.

Sociometric Criterion

A standard which provides the basis of choices that a person must

make (Shertzer & Stone, 1966). There are five criterion for the choices to be made in the instrument used in this investigation.

Sociometric Score

An algebraic summation of the choices received by each student from every other student on the sociometric instrument used.

Sociometric Test, Scale, or Instrument

The method used to evaluate the sociometric structure of a group (Shertzer & Stone, 1966).

Review of Pertinent Literature

It had been reported (Martin, 1941) time and again that the personality development and social adjustment of the mentally handicapped child is inferior to that of the typical child. In the regular grades, he is very unhappy. He often develops abnormal personality characteristics, especially anti-social behaviors in order to compensate for a school environment which is completely inappropriate to his needs.

Shattuck (1946) presented the representative conclusions reached by a panel discussion. They are (a) segregation is only a frame of mind, not a physical entity; (b) segregation for brief periods may give a child a chance to face the problems of living with normal children; (c) an individual is the product of his culture and his reactions to that culture; and (d) segregation drains the sense of security gained from a sense of belonging to a group.

Johnson (1950) designed an exhaustive study to determine the social position of the mentally handicapped in the regular grades. Two communities were chosen in which there were no special classes. Twenty-five classes, each containing one or more mentally handicapped child, were investigated. They consisted of five classes at each grade level, one through five inclusive.

The results of this investigation demonstrated rather clearly that the mentally handicapped children were significantly more isolated and significantly more rejected than the typical children in the same class. Johnson concluded that this isolation and rejection was probably due to their mental deficiencies rather than some relatively unrelated factor such as a difference in chronological age or in sociometric status.

The regular classes were not meeting the needs of the mentally handicapped children. In addition to being significantly different from their classmates academically and intellectually, they were also segregated socially, in spite of their physical presence in the group. This implied to Johnson that in the public schools segregation does not necessarily mean removing a child from his group and placing him in a special class. It meant that a child may be socially segregated, although physically present in the group. The "isolation" and "rejection" arguments used against the use of special classes, therefore, proved shallow. The social segregation of the mentally handicapped group in the regular grades was complete.

More recently, Curtis (1964) conducted a study which included 229 adolescent subjects. The data collected yielded the following results: (a) the mentally retarded adolescents showed a significantly more negative self-concept than any other group; (b) the mentally retarded group showed a significantly more negative ideal self-concept than any other group; (c) the mentally retarded group showed a greater discrepancy between their self-concept and their ideal self-concept than any other group; (d) the mentally retarded group was more like the subjects of their own chronological age, rather than more like the group which was of the same mental age; and (e) the greatest difference in scores on the self-concept test was found between the mentally retarded group and the intellectually

superior group.

The results of this investigation led the author to conclude that self-concept is related to the intellectual aspect of human development. All devices utilized indicated that the greater the intelligence of the group, the more positive was the self-concept.

Renz and Simonsen (1969) conducted an investigation which did not agree with the findings of Johnson (1950). This study compared the social perception and attitude of normal adolescents toward two types of grade-mates: normals and special class EMRs. Data obtained showed that, although the EMRs were segregated for instructional purposes, it did not necessarily follow that they were socially segregated. In addition, it appeared that the handicapped children had the opportunity to be socially integrated and accepted by the rest of the school population.

Pumphrey, Goodman, Kidd, & Peters (1970) directed a study over a five-year period in which forty-one retarded children participated in numerous kinds of ongoing leisure-time activities at a community center. A follow-up study showed that they had done at least "minimally well." Although the social behavior of the retarded subjects was rated as significantly different from that of the normal children in the same group, differences were often manageable and diminished with continued exposure to normal children.

McDaniel (1970) tested the impact of participation in extracurricular activities on social acceptance and social rejection. The subjects were thirty-two EMRs from a Southern inner-city school. It was discovered that exposure to extracurricular activities (specifically, square dancing and basketball) over a six week period increased social acceptance and either diminished or stablized social rejection. The experimental group demonstrated from the outset both higher social acceptance

and higher social rejection than the control group. Since controls were built into the design to minimize the impact of the Hawthorne effect, the tendency of many extracurricular activities, especially those involving physical contact, to awareness of others was offered as an explanatory variable.

Goodman, Gottlieb, and Harrison (1972) grouped primary and intermediate unit EMRs by sex and administered sociometric questionnaires to determine their social acceptance by other children. The major results: (1) non-EMRs accept EMR children less often and reject them more often than they do other non-EMR children; (2) younger non-EMR children are more accepting of other children than older non-EMR children; (3) sex differences in rejection patterns were apparent; and (4) integrated EMR children are rejected significantly more often than segregated EMR children by male raters but not by female raters. The data for the intermediate unit did not indicate that an integrated educational placement is conducive to greater social acceptance of the EMR child. On the contrary, male raters rejected the integrated EMR children significantly more often than segregated students. Unfortunately, the issue regarding the interaction between age of placement and educational setting as it effects social acceptance remains unsettled because there was no segregated primary EMR class available for comparison.

Kolstoe (1972) has presented an article in which he attempted to refute some of the data used to support widespread charges that methods of identifying the retarded and their attendant educational programs hinder the students' progress. Six specific "allegations" were considered (and summarily dismissed):

1. That mental retardation is noticeable during the school years but that the condition disappears in adult years,

2. That labeling harms children,

3. That special class placement is bad for the child's self-concept,

4. That segregated programs are fruitless,

5. That teachers contribute to the self-fulfilling prophesy of low achievement, and

6. That general education can deal adequately with individual differences in the regular classroom (Kolstoe, 1972, p.51).

Kolstoe concludes that these criticisms are really aimed at the administrative aspects of special classes, not at their efficacy per se. He went on to identify three of these aspects as (1) the use of IQ test scores to identify the retarded, (2) a failure to reevaluate the effectiveness of the program on a regular basis, and (3) the absence of a work preparatory sequence of experiences to effect smooth transition from school to community living. The author argued that simply because some programs have not been completely satisfactory there is no reason to eliminate all programs. Any other kinds of services that can be justified by empirical evidence which are appropriate for some children should be in addition to, not at the expense of, special classes.

Hafner (1972) reported the evaluation of the first year of a five-year project designed to (a) bring about systematic change through the training of educational teams, (b) develop innovative educational programs for the handicapped in the regular classroom, and (c) develop training models which could be used by other school districts and institutions. It was reported that handicapped children were successfully maintained in the regular classroom, with the special education teacher changing her role to provide broader support services to both children and teachers. More positive attitudes toward the maintenance of the

handicapped child in the regular classroom were developed and maintained, and the concept of mainstream education for special education was being expanded to other campuses within the thirty-one project districts.

Finally, Carvajal (1972) directed a study in order to analyze the predictor variables of four criteria of self-concept in 100 adolescents to determine whether the physical setting has a significant effect on their self-concept. Fifty individuals were selected from an integrated setting and fifty from a segregated setting. All 100 students met these criteria: (1) members of the Caucasian race, (2) had been in their present setting for the past two years, (3) had scored within the educable mentally handicapped range on an individual test of intelligence, and (4) had no evident physical impairment. Analysis of the data led the author to conclude that physical setting, whether segregated or integrated, is not a significant variable in the development of the self-concept of educable mentally handicapped adolescents.

Thus, it can be seen that the research data presents contradictory conclusions regarding the effects of segregated and non-segregated placement of EMR children, as it relates to their social acceptance and self-concept. Some researchers support the need for special classes for the retarded and others contend that these children should be integrated into activities and classrooms with the normal children. The purpose of this research is to compare the social acceptance of previously segregated EMR students and normal students. The comparisons will be made at the beginning and end of their first year of placement in a regular classroom.

Limitations of the Present Study

1. The subjects used in this study came from a restricted geographical area; specifically , Montgomery County, Tennessee.

2. No attempt was made to determine what regular class students, if any, had previously been exposed to children classified as educable mentally handicapped, nor to what degree this exposure was experienced.

3. No attempt was made to measure empirically the attitudes of teachers and administrators toward educable mentally handicapped children.

Assumptions Basic to the Nature of this Investigation

1. The subjects were giving honest responses during both administrations of the sociometric instrument.

2. Human feelings possess their unique, individual validity for the particular person expressing those feelings.

3. Sociometric status does not necessarily depend upon measured intellectual capacity in any social situation.

Procedures for the Collection of Data

The subjects used in this study were taken from two public elementary schools in Montgomery County, Tennessee, which is located near the southern boundary of Kentucky in the north-central section of the state. The sociometric tests were administered in all fourth, fifth, and sixth grade classes in each school. However, the results include the scores of only those children from classes which contained EMR children who were previously segregated.

Procedures Used in Data Treatment

The hypotheses on which this investigation was based were analyzed by measuring the differences in mean sociometric scores of normal and EMR children and between initial and final test administrations. These differences were tested for significance by use of the Kolmogorov-Smirnov test with large samples.

CHAPTER II

SELECTION AND DESCRIPTION OF THE SAMPLE, THE MEASURING INSTRUMENT, THE EXPERIMENTAL PROCEDURE, AND ANALYSIS OF THE RESEARCH DESIGN

Selection of the Sample

In the summer of 1972 the school board of the Clarksville-Montgomery County, Tennessee, Unified School System implemented the policy that all students who were classified as educable mentally retarded be placed in the regular classroom. This policy had been initiated on an experimental basis in three of the eight elementary schools in the school system during the 1971-1972 school year. The results prompted the administrative officials to implement the policy on a system-wide basis. Prior to 1971, all EMR children were segregated in their own self-contained classrooms. Thus, the remaining elementary schools placed all the EMR children in the regular classroom at the beginning of the 1972-1973 school year. The two largest elementary schools were selected for this investigation. They shall be designated as school "A" and school "B." School A has 511 students while school B has 556.

According to the coordinator of curriculum and instruction for the school system, one of the justifications for the establishment of this new policy was that the integration of these EMR students would result in their increased social acceptance by their peer groups. It was felt that social ostracization and the concomitant lack of understanding of the mentally retarded would be greatly reduced by placement of the EMR students in the regular classroom.

Description of the Sample

The purpose of this study is to determine if placement in the regular classroom improved the sociometric status of EMR children as the school year progressed. The two schools chosen for this investigation had provided segregated classes for the educable mentally retarded until the 1972-1973 school year.

The students from school A included 108 subjects in the fourth, fifth, and sixth grades, with 12 of these being identified as former EMR students. In school B, there were 108 subjects included from the fourth, fifth, and sixth grades, with 9 being identified as former EMR students. In summary, there were 216 fourth, fifth, and sixth grade students tested, with twenty-one of these being identified as former EMR students.

Procedures Employed to Secure School Cooperation

Initially, a letter containing a skeleton outline of the purpose of the study and the procedures to be utilised was sent to the coordinator of curriculum and instruction for the school system. After discussion with and subsequent approval by the superintendent of schools, the author was allowed to contact the building principals. The purposes and procedures to be employed were explained in more detail. Dates, specific times, and room assignments were made after consultation with the teachers involved. Periodic telephone contacts were made between the pre-and post-testing dates in order to maintain the high degree of rapport established during the initial contacts with the principals and teachers.

Description of the Measuring Instrument

The sociometric scale How I Feel Toward Others (Bonney, 1954) requires approximately twenty to thirty minutes to administer to a class-

room. Of the three basic types of sociometric instruments identified by Bonney (1960), this scale is classified as a measurement of reputation; that is, it obtains data on how individuals regard each other in reference to five sociometric criterion of friendship.

The instrument contains choices which offer two levels of acceptance, one position of neutrality, and two levels of rejection. Each subject is given the opportunity to rate every other child in the homeroom on one of five categories: (1) Best friend, (2) Other friend, (3) Person I don't know, (4) Not my friend, and (5) Do not want as friends--as long as they are like they are now. A copy of the criterion upon which these choices were to be made and complete instructions for taking the test was given to each subject. A copy of the instrument is included in Appendix A.

The choice of a sociometric instrument to collect the data pertinent to the problem under investigation may be justified by the following rationale:

> Within any formal organization there is an informal organization based on interpersonal attractions and repulsions. These informal relationships greatly affect the official functioning of the group and have important personality consequences for each person in the group. (These) interpersonal bonds between the members of a group are necessary to good morals and to the normal personality growth of the individual. If this rationale is accepted, it naturally follows that an adequate program of personality evaluation of pupils must include data on interpersonal relationships (Bonney & Hampleman, 1962, p. 60-61).

Collection and Classification of the Data

Each of the subjects was administered the Bonney How I feel Toward Others sociometric scale on two occasions approximately seven months apart--during the first week in October and during the first week in May. At the time of the initial administration, the students had just begun

to "get settled" into the new school year. It was felt that the normal students had not yet had sufficient time to form opinions or attitudes toward the former EMR students based on personal contact. The second administration was near the end of the school year at which time the EMR students had been in the regular classroom for eight months. It was felt that this time period was sufficient to allow the regular students to become better acquainted with the former EMR students, and, consequently to base their ratings on personal contact with these students.

Upon entering the classroom, the author talked informally with the subjects in order to establish at least a moderate degree of rapport. After each subject was given a copy of the scale and its instructions, this information was read aloud by the author, while the subjects read silently. When all questions had been answered, the test began. There was no time limit and no overt pressure to complete the test quickly. Each subject then turned his test paper and set of instructions face down on his desk, raised his hand, and waited until either the author or the classroom teacher collected them.

An individual's score was calculated by assigning a weighted algebraic score in the following manner: Best friend, +2; Other friend, +1; Person I don't know, a zero was given; Not my friend, -1; and for Do not want as my friend, a -2 was assigned. Consequently, each subject's score was converted to an algebraic total of positive and negative feeling from every other child in the classroom.

The maximum score that an individual could receive was determined by multiplying the number of children who ranked him by a +2, the assigned score for Best friend. This score was then divided into the score actually received by the subject to obtain the percentage of the possible

score. Each score was then multiplied by one hundred. Since some subjects received a negative score(s), this constant value was inserted to provide a positive value to the score. This technique made it possible to compare scores from different groups that may have a different number of subjects.

Analysis of the Research Design

This investigation is based on the one-group pretest-posttest design (Campbell & Stanley, 1963, p.7). This is one of the most widespread experimental designs in educational research. Inherent in this design, there are five extraneous variables that can jeopardize internal validity. These may be summarized in the following manner:

1. History--between the pretest and posttest many other change-producing events may have occurred in addition to the experimenter's exposure of a group to an experimental variable or event.
2. Maturation--all of the biological and psychological processes which systematically vary with the passage of time, independent of specific external events.
3. Effect of Testing--students taking the same test or another form of the same test for the second time often attempt to present themselves as better adjusted or more socially acceptable.
4. Instrumentation or "instrument decay"--the autonomous changes in the measuring instrument which might account for the difference in pretest and posttest scores.
5. Statistical Regression--the regression of scores toward the mean due to the imperfect correlation between pretesting and posttesting.

Because of the nature of the setting in which this investigation took place, it was determined the two primary variables which might affect internal validity were history and maturation. The former was chosen due to the inummerable events in a single day of a student's life that may affect his rating of others. The latter variable was selected because of the period of rapid physical, mental, and psychological changes that children of this age are experiencing.

CHAPTER III

PRESENTATION AND INTERPRETATION OF DATA

Analysis of Pre-test Data

Table I concerns the pre-test data and shows the number of subjects in both schools by grade and the mean sociometric score achieved per grade level. In School A there were twelve experimental subjects with a mean sociometric score of 96.67 and ninety-six control subjects with a mean sociometric score of 112.91. At School B there were nine experimental subjects with a mean sociometric score of 110.0 and ninety-nine control subjects with a mean sociometric score of 126.85. When the scores of the two schools are combined we find that the twenty-one experimental subjects had a mean sociometric score of 102.43, while the one hundred ninety-five control subjects had a mean sociometric score of 120.0 on the pre-test.

Table II presents a graphic application of the pre-test data according to the Kolmorgov-Smirnov test in which the possible scores are grouped into eight point ranges from -48 to +47. The major step was to arrive at the cumulative distributions of proportions between the experimental and control scores, from which the differences d_c are found. The largest difference, which is .302, is the essential statistic D. After computing the chi square formula for this test (Guilford & Fruchter, 1973, p.226), it was determined that the D in Table II was large enough to be significant at the .05 level.

TABLE I

PRE-TEST DATA CLASSIFIED ACCORDING TO SCHOOL AND GRADE LEVEL

School A	Experimentals (N/X)	Controls (N/X)
4th	1/96.00	24/109.125
5th	10/96.69	46/123.260
6th	1/98.00	26/ 98.080
Sub-Totals	12/96.67	96.112.910
School B		
4th	3/102.33	26/151.42
5th	1/ 87.00	25/105.68
6th	5/119.20	48/124.58
Sub-Totals	9/110.00	99/126.85
Final Totals	21/102.43	195.120.00

TABLE II

PRE-TEST DATA PRESENTED
ACCORDING TO KOLMOGOROV-SMIRNOV TEST

Score	f		cf		cp		dc
	C	E	C	E	C	E	
40 - 47	-	-	195	21	1.000	1.000	.000
32 - 39	2	-	195	21	1.000	1.000	.000
24 - 31	14	1	193	21	.990	1.000	.010
16 - 23	33	2	179	20	.921	.950	.029
8 - 15	51	2	146	18	.749	.855	.106
0 - 7	47	4	95	16	.487	.762	.275
-8 to -1	29	7	48	12	.246	.548	.302
-16 to -9	13	4	19	5	.098	.236	.138
-24 to -17	5	1	6	1	.030	.048	.018
-32 to -25	1	-	1	0	.005	.000	.005
-40 to -33	-	-	0	0	.000	.000	.000
-48 to -41	-	-	0	0	.000	.000	.000

*D = .302

*Significant at .05 level

Implications of the Statistical Analysis of the Pre-test Data

The data from the analysis of the mean sociometric scores obtained on the pre-test indicates that there is a significant difference at the .05 level in the sociometric status of the former EMR students as compared to the regular class students. This difference is in the direction of lesser social acceptance for the former EMR group. Children who have been in the regular class appear to be better accepted by their classmates as friends than are children who were, until the present year, in the special education classroom

Analysis of the Post - test Data

Table III concerns the information gathered on the post - test and shows the number of subjects in both schools by grade level, and the mean sociometric score achieved per grade level. In School A there were twelve experimental subjects with a mean sociometric score of 108.17 and ninety-six control subjects with a mean sociometric score of 138.65. Of the subjects at School B, the nine experimental individuals had a mean sociometric score of 88.50, while the ninety-nine control subjects obtained a mean sociometric score of 121.44. When the scores of the two schools were combined, it was found that the twenty-one experimental subjects had earned a mean sociometric score of 99.76 and that the one-hundred ninety-five control subjects had obtained a mean sociometric score of 128.25 on this administration.

Table IV presents the same information, but this time it is arranged according to the Kolmogorov-Smirnov test. The possible scores were grouped into eight-point ranges from -48 to +47. The major step was to determine the cumulative distributions of the proportions between the scores of the experimental and control groups, from which the differences

TABLE III

POST-TEST DATA
CLASSIFIED ACCORDING
TO SCHOOL AND GRADE LEVEL

School A	Experimental (N/X)	Controls (N/X)
4th	1/138.00	24/120.38
5th	10/101.00	46/150.11
6th	1/150.00	26/138.69
Sub-Totals	12/108.17	96/138.65
School B		
4th	3/ 62.00	26/100.08
5th	1/ 88.00	25/104.96
6th	5/104.60	48/131.48
Sub-Totals	9/ 88.50	99/121.44
Final Totals	21/ 99.76	195/128.25

TABLE IV

POST-TEST DATA PRESENTED
ACCORDING TO KOLMOGOROV-SMIRNOV TEST

Score	f		cf		cp		d_c
	C	E	C	E	C	E	
40 - 47	2	-	195	21	1.000	1.000	.000
32 - 39	11	-	193	21	.990	1.000	.010
24 - 31	29	3	182	21	.910	1.000	.090
16 - 23	42	2	153	18	.765	.855	.090
8 - 15	49	2	111	16	.555	.762	.207
0 - 7	32	4	62	14	.310	.667	.357
-8 to -1	17	2	30	10	.150	.480	.330
-16 to -9	8	2	13	8	.065	.384	.319
-24 to -17	2	4	5	6	.025	.288	.263
-32 to -25	2	1	3	2	.015	.096	.081
-40 to -33	1	-	2	1	.010	.048	.038
-48 to -41	-	1	1	0	.005	.000	-.005

*D = .357

*Significant at .01 level

d_c were found. The largest difference, which is .357, is the essential statistic D. After computing the chi square formula for this test (Guilford & Fruchter, 1973, p.226), it was determined that the statistic D in Table IV was large enough to be significant at the .01 level.

Implications of the Statistical Analysis of the Post-test Data

The data from the analysis of the mean sociometric scores obtained on the post-test indicates that there is a significant difference at the .01 level in the sociometric status of the former EMR students as compared to the regular class students. This difference is in the direction of lesser social acceptance for the former EMR students. Children who have been in the regular class appear to have a better chance of being accepted socially by their classmates than do children who were previously in the special education classroom.

It should also be noted that the post-test data produced a difference in scores which was at a higher level of significance (.01) than was produced by the pre-test data (.05). With this point in mind, the results of the post-test data should be given additional credence when evaluating the results of this investigation.

Statistical Analysis of the Differences in the Scores Obtained on the Pre-test and Post-test by the Experimental and the Control Group

Table V shows the differences in the scores obtained by the experimental group between pre- and post-test administrations. The data is presented according to the Kolmogorov-Smirnov test for small samples (Guilford & Fruchter, 1973, p.223) in which it is essential to find the cumulative distributions for the two test administrations. The last operation is to find the category differences K_c, which range from -5 to

TABLE V

DIFFERENCES IN SCORES OBTAINED
ON PRE- AND POST-TEST
BY EXPERIMENTAL GROUP

Score	f		cf		K_c
	Pre-test	Post-test	Pre-test	Post-test	
40 - 47	0	0	21	21	0
32 - 39	0	0	21	21	0
24 - 31	1	3	21	21	0
16 - 23	2	2	20	18	2
8 - 15	2	2	18	16	2
0 - 7	4	4	16	14	2
-8 to -1	7	2	12	10	2
-16 to -9	4	2	5	8	-3
-24 to -17	1	4	1	6	-5
-32 to -25	0	1	0	2	-2
-40 to -33	0	0	0	1	-1
-48 to -41	0	1	0	0	0

*K = 2

*Not Significant at the .05 level

+2. The largest K_c is 2 and after consulting the table of critical values of K for this test (Guilford & Fruchter, 1973, p. 532), it was found that the K in Table V was not significant.

Table VI shows the differences in the scores obtained by the control group between pre- and post-testing. The data is presented according to the Kolomogorov-Smirnov test for large samples (Guilford & Fruchter, 1973, p. 225), in which the essential statistic D was .191. After computing the chi square formula for this test, it was determined that the D in Table VI was large enough to be significant at the .001 level.

Implications of the Statistical Analysis of the Differences in Scores Obtained on the Pre-test and Post-test by the Experimental and the Control Group

The data from the analysis of the changes in the mean sociometric scores between pre-testing and post-testing by the experimental group indicates that there was not a significant change in their sociometric status. During the course of the school year over which this investigation was conducted, there was no significant positive change in the sociometric status of the former EMR students.

On the other hand, data from the analysis of the changes in the sociometric scores between pre-testing and post-testing by the control group indicate that there was a change which was significant at the .001 level. During the course of the school year over which this investigation was conducted, there was a significant positive change in the sociometric status of the regular class students.

The level of significance achieved at this point should also be noted. The high level obtained from the data in Table VI appears to reflect a clear distinction in the rate of growth of the sociometric status between the two groups.

TABLE VI

DIFFERENCES IN SCORES OBTAINED ON
PRE- AND POST-TEST BY CONTROL GROUP

Score	f		cf		cp		D_c
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	
40 - 47	0	2	195	195	1.000	1.000	.000
32 - 39	2	11	195	193	1.000	.990	.010
24 - 31	14	29	193	182	.990	.910	.080
16 - 23	33	42	179	153	.921	.765	.156
8 - 15	51	49	146	111	.746	.555	.191
0 - 7	47	32	95	62	.487	.310	.177
- 8 to - 1	29	17	48	30	.246	.150	.096
-16 to - 9	13	8	19	13	.098	.065	.033
-24 to -17	5	2	6	5	.030	.025	.005
-32 to -25	1	2	1	3	.005	.015	-.010
-40 to -33	0	1	0	2	.000	.010	-.010
-48 to -41	0	0	0	1	.000	.005	-.005

*Significant at .001 level

*D = .191

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The primary purpose of this investigation was to determine if the placement of educable mentally retarded students in the regular classroom with only part time instructional assistance from a resource teacher would be instrumental in improving their social acceptance as measured by a sociometric instrument administered near the beginning and near the end of the school year.

The subjects selected for this study came from two elementary schools which previously had segregated classrooms for EMR students. In School A, there were 108 students, 12 of these being identified as educable mentally retarded. In School B, there were also 108 students, with nine of these being classified as educable mentally retarded. All students in both schools had been placed in the fourth, fifth, or sixth grade regular class.

Any conclusions reached as a result of this investigation must be evaluated with the fact in mind that they can apply only to the two schools involved and attempts to generalize these conclusions without bearing this in mind would be hazardous at best. Based on a statistical analysis of the data gathered from both administrations of the test, the following conclusions have been derived:

1. The hypothesis that there is no significant difference in the measured sociometric status of the regular class children as compared to the EMR children at the beginning of the year (Hypothesis A) must be rejected on the basis of the data found in tables I and II. This data not only shows a significant difference at the .05 level between the two

groups, but the difference was in the direction of lesser social acceptance of the EMR group.

2. The hypothesis that there is no significant difference in the measured sociometric status of the regular class children as compared to the EMR children at the end of the school year (Hypothesis B) must be rejected on the basis of the information contained in tables III and IV. The data failed to show no significant difference between the two groups at the end of the year. In addition, the significant difference that was obtained was in the direction of lesser social acceptance of the EMR group of subjects. However, the data which led to this conclusion must be examined quite closely to discern its full impact on the hypothesis and on the study in general. The failure of this hypothesis is entirely due to the decreased mean sociometric scores obtained by both groups in School B on the post-test andministration. The EMR group fell from a score of 110.0 to 99.76, while the regular class group showed a decrease of from 126.85 to 121.44. In contrast, the subjects from School A made a considerable gain. The EMR group rose from 96.67 to 108.17. The regular class group showed an increase from 112.91 to 138.65.

3. The hypothesis that there is no significant difference in the change of sociometric status of the EMR children as measured by pre-testing and post-testing must be accepted on the basis of the data presented in Table V. Over the entire seven month period over which the investigation was conducted there was no overall change in the sociometric status of the EMR group. The word "overall" is to be emphasized here in light of the discussion of conclusion two.

4. The hypothesis that there is no significant difference in the change of the sociometric status of the regular class children (Hypothesis

D) as measured by pre-testing and post-testing must be rejected on the basis of the data provided in Table VI. Not only did this hypothesis prove to be valid, but it did so in spite of the decreased mean sociometric scores of the subjects in School B. In addition, the level of significance that was achieved (.001) was the highest level obtained by any of the statistical analyses in this investigation.

Recommendations for Further Research

1. The determination of the teacher variables which could affect the social acceptance of educable mentally retarded children in the regular classroom, such as age, experience, sex, race, or socio-economic background.

2. The comparison of ages and time placement in the regular class situation with the scores obtained to determine the generally suitable time to make this change in classroom environments.

3. A comparison of the scores earned by boys versus girls to determine which sex seems to most easily adapt to this change. This would need to be followed by an investigation into possible reasons that one sex adapts more readily and recommendations to help the other sex learn to adapt more readily.

4. A comparison of socio-economic backgrounds of the regular class students that the EMR children have been or will be placed with.

5. A comparison of the amount of previous exposure the individual regular students have had and its effect on their attitudes toward EMR children.

6. More investigation of the same basic nature as the present one which can be extended over three to six years to determine what effect, if any, time would have on the sociometric gains or losses experienced

by these EMR children. In addition, what effect, if any, if the same variables that had a bearing on the scores in the initial testing held as much weight at the time of the final test administration.

Appendix A

HOW I FEEL TOWARD OTHERS

The teacher and the pupils should read this entire scale together.

To the pupils:

You have all taken a lot of tests in arithmetic, reading, and other subjects. You have been asked to take those tests so your teachers would know better how to help you in your studies. Now you are asked to tell how you feel toward other children in your room. This is not a test like the others you have taken. There are no right or wrong answers. All you need to do is to tell how you feel toward other children in your room. By doing this you will help the teacher to know which other children you get along with best.

No child will be allowed to see another child's paper.

DIRECTIONS: On another sheet of paper you have the names of all the children in your room. As soon as we finish reading the directions you will be asked to place a number to the left of each of these names, including your own. The numbers which you will use are the numbers of the paragraphs listed below.

Do not put any numbers now. Please put your pencils down until you are told by your teacher to begin.

We must first read all the directions together, so you will be sure to know how to mark your list of names.

Number 1 is for: My Best Friends. How can we tell our best friends from just ordinary friends? Below you will find listed some things which are generally true of our best friends. Put a 1 to the left of the names of those children who are best friends.

A. You play with your best friends a lot and have fun with them.
B. You treat them nice, help them whenever you can, and share your things with them.
C. You go places with them and talk with them a lot.
D. You go to their homes and they come to your home quite often.

Number 2 is for: My Other Friends. Besides our best friends all of us have other friends whom we like fairly well. Put a 2 to the left of the names of those children you like fairly well.

A. You play with them sometimes, but you do not always have fun with them.
B. You are nice to them most of the time, but you seldom share your things with them.
C. Sometimes you go places with them, and talk with them, but not very often.
D. You seldom go to their homes, and they seldom come to your home.

Number 3 is for: Children I Don't Know. There may be some children on your list whom you don't know well enough to know whether you like them or not. It may be that you have not been with them enough to tell much about them. You don't know how you really feel about these children. Put a 3 to the left of the names of those children whom you don't know well enough to rate.

Number 4 is for: Children I know but who are not my friends. All of us know some persons quite well but we do not consider them to be our friends. Put a 4 to the left of the names of those children you do not consider as your friends.

A. You seldom play with them.
B. You do not get along very well with them when you are around them.
C. You do not talk to them or go places with them unless it is necessary to be polite.
D. You do not like some of the things they do, and the way they act at times.

Number 5 is for: Children I do not want to have as friends - as long as they are like they are now. Nearly all of us find there are a few persons we cannot get along with. These people may be all right in some ways, and may be regarded as good friends by others, but not by us.

A. You avoid playing with them, and you never choose them as partners for a game.
B. Sometimes you fuss, quarrel, and fight with them when you are around them.
C. You never go places with them and you never talk with them unless you have to.
D. You dislike very much some of the things they do, and the way they act at times.

Now let us go over the main headings.

What is number 1 for? (Student response)
What is number 2 for? (Student response)
What is number 3 for? (Student response)
What is number 4 for? (Student response)
What is number 5 for? (Student response)

You do not have to use all these numbers. You may use any of these as many times as you wish. All you need to do is to show how you feel about each person on your list by putting one of the above numbers to the left of his name.

Be sure to put a number to the left of every name. Do not leave out anyone.

Has everyone found his own name? If your name is not on the list tell the teacher so she can have all the children add your name to their lists. As soon as you have found your name or have written it in, put a 6 to the left of it.

If you have any questions, please ask them now.

When you have finished marking your list, turn your paper face down on your desk and leave it there until the teacher takes it up.

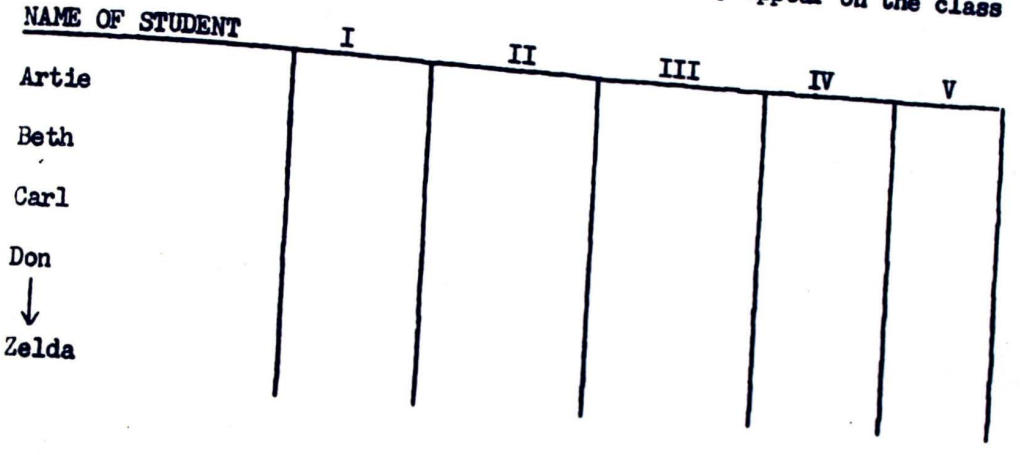
Go ahead now and place the other numbers (1-2-3-4-5) to the left of the rest of the names on your list.

Appendix B

Scoring of the Sociometric Scale

"How I Feel Toward Others"

Following is an example of the scoring form you will use for scoring. List the names in the same order as they appear on the class rolls used by the student.



Arrange the papers from the students in alphabetical order. Take Artie's paper and put a check mark by his name to show that his paper has been recorded. Since Artie is a boy, his choices will be recorded in red pencil and the girl's choice will be recorded in blue pencil. Below is a copy of Artie's paper.

Name of Student

6 Artie

4 Beth

1 Carl

3 Don

5 Zelda

The information from Artie's paper will be entered on the scoring form as follows:

Name of Student	I	II	III	IV	V
Artie	(8)	(10)	(5)	(4)	(2)
Beth				1	
Carl	1				
Don			1		
Zelda					1

After you have recorded every choice given by Artie, count the number of first choices he has given, the number of second choices, the number of third choices, the number of fourth choices, and the number of fifth choices. Enter the number of first choices he gave in the upper left hand corner of the proper cell. For example, let's say there were 30 children in Artie's classroom, twenty-nine beside he. He gave 8 first choices, ten second choices, five third choices, four fourth choices and two fifth choices for a total of 29. This completes Artie's paper.

We then go through the same procedure for Beth's paper except we record all her choices in a different colored pencil as mentioned previously. The purpose of this is to determine how many choices each child receives from boys and how many from girls. After all the papers have been recorded, count the number of choices each child has received. For every first choice received, give 2 points; for every second choice, give 1 point; for every 3 choice, no points; for every fourth choice, give a negative 1 point; for every fifth choice, give a negative 2 points. The sum of these points for each choice should be entered in the upper right hand corner of the proper cell.

Artie received 6 first choices so he received 2 points for each first choice received for a total of 12 points. He received 14 second choices at one point each for a total of 14 points. He received three third choices at no points. He received 5 fourth choices at -1 for each choice for a total of -1. He received one fifth choice for a total of -2. Add the sums of the choices received algebraically. You have a total positive score of 26 and a total negative score of -8, for a total of 19 points. His score theoretically could have been any where between -58 and +58 with 29 choices possible from his classmates. The algebraic score really is not as meaningful to teacher as examining the number and kinds of choices each child receives.

For instance, the pattern for each of the children is quite different. Although Carl and Artie have the same total, their pattern of acceptance in the class is different with Carl having many more close friends than Artie and fewer who strongly reject him. Beth has no close friends although she apparently wants them very badly as she listed 10 persons to be her best friends when no one listed her. She has a large number, 20, who consider her another friend but she evidently desires more closeness than she has. Possibly, you as a teacher could give her an opportunity to be seated near a first choice or work with a person she has chosen as a best friend to try to develop a closer relationship.

Don, on the other hand, doesn't feel accepted and doesn't accept the other children. His feeling seems to be, "So--they don't like me--well, I don't like any of them either." We would feel, of course, that this would be a danger signal for Don not to care what anyone thought of him. He would be likely to be a troublemaker and would probably often be blamed by the children and the teacher for things he did <u>not</u> do so it can become a vicious cycle.

Some interesting studies can be done with this instrument, correlating number of first choices and last choices with intelligence, social class, sex, race, or number of children in family to name only a few of the criteria.

In classrooms in which there is a great deal of rejection, there are likely to be behavior problems. There is also a strong possibility that the teacher may have a poor relationship with her class and the children are displacing their feelings of anger toward the teacher to their class-

mates. They may also choose a particular child as a scapegoat, one who is too weak to protect himself, on whom they vent the anger they feel toward the teacher.

Another thing you need to notice in elementary school is whether the first choices are from members of the same sex and the rejections from members of opposite sex and vice-versa. This is the reason we mark all the choices made by boys with one color and all those made by girls with another color of pencil. This gives us a little more information concerning the acceptance or rejection patterns of children. For instance, if all the rejections of a fifth grade boy is from girls we would not be too concerned, unless almost all the girls rejected him but not the other boys in the class. We might then want to try to discover why the girls felt this way about him.

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