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THE EFFECTS OF TRAINING FOR MAINSTREAMING AND IMPLEMENTATION
OF A MAINSTREAMING TECHNIQUE ON THE SELF-CONCEPT OF
MULTIPLY HANDICAPPED ADOLESCENTS

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

Sheila Leigh Baker

December 1985

DEDICATION

To all the handicapped people still
struggling for acceptance.

ACKNOWLEDGEMENTS

Dr. Donald J. Dickinson provided the feedback necessary for the completion of this thesis. His faithfulness as a teacher and as a support person was unrelenting. He and my committee members, Dr. Kathy Kopp and Dr. Roger Frey, permitted me the time necessary for this task, a true learning process.

Mark provided the love that freed me to experience myself in relation to the world, rather than in relation to my heart.

ABSTRACT

The purpose of this study was to investigate the effects of a mainstreaming procedure called "infusion mainstreaming" on the self-concepts of 13 multiply handicapped students.

The 13 experimental students received training for mainstreaming throughout the school year. Training consisted of a special education (self-contained) classroom program utilizing behavior management techniques, group process activities, individual counseling, sociodrama, and mainstream awareness. Training also included a program providing training and consultation for the staff at the special school and at the mainstream school.

The experimental students were mainstreamed with a technique called "infusion." The students, teacher and aide moved from the special school (a comprehensive rehabilitation center) to the mainstream school (an elementary school) as one unit. Infusion is a technique to ease the transition of the mainstreamed students from the current placement to his/her new placement. The purpose of the technique was to facilitate the students' adjustment to the regular classroom by retaining familiar elements of the students' self-contained class and gradually introduce features of the new regular school environment. Examples of familiar elements which were retained and of new elements which were gradually introduced to the experimental students are (1) support system, (2) classmates, (3) activities, (4) environment, and (5) materials.

Several different instruments were used to measure student and teacher attitude. Three instruments were used to measure the change in self-attitude of the students after being mainstreamed. A teacher attitude scale was used to measure the teacher's perception of the students' self-concept. All four instruments used were self-report measures. The four instruments were used as pre- and post-mainstreaming measures.

Four null hypotheses were advanced:

1. There will be no significant change in the students' perception of their ability to perform seven common classroom activities as measured by The School Activity Scale (Dickinson & Workman, 1979) following training for mainstreaming and mainstreaming with the infusion technique.

2. There will be no significant change in the students' perception of their ability compared to other students to perform seven common classroom activities as measured by The Relative School Activity Scale (Dickinson & Workman, 1979) following training for mainstreaming and mainstreaming with the infusion technique.

3. There will be no significant change in the students' perception of their dislikes about self as to behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction as measured by The Children's Self-Concept Scale (Piers & Harris, 1964) following training for mainstreaming and mainstreaming with the infusion technique.

4. There will be no significant change in the teacher's perception of the students' self-concept as measured by a teacher attitude scale following training for mainstreaming and mainstreaming with the infusion technique.

A t test was used to analyze differences between means. The t test used was for correlated samples.

The four null hypotheses were accepted. The overall findings of the study support the hypotheses that there would be no significant change in self-concept following training for mainstreaming and mainstreaming with the infusion technique. The results were discussed in terms of possible explanations for the lack of significant difference in the pre- and post-self-concept scores.

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CHAPTER 1

INTRODUCTION

The purpose of Public Law 94-142 (PL 94-142) has been to assure a free and appropriate public education to all handicapped children. The law emphasizes providing special education and related services designed to meet the child's unique needs in the least restrictive environment (Section 3 (c)).

In response to Public Law 94-142, educators and administrators alike have attempted to move special education students back into the regular education classroom when this seems to be the least restrictive environment. This return to the regular education environment is called mainstreaming.

A major concern about mainstreaming has been the impact of mainstreaming on the child. Questions focus on the effect of mainstreaming on the child's self-concept, on the way a child feels about him/herself following mainstreaming (Boersma, Chapman, & Battle, 1979; Carroll, 1967; Carvajal, 1972; Lawrence & Winschell, 1973; McGarvie, 1970; Clifford & McKinney, 1974; Schurr, Towne, & Joiner, 1972; Scott, 1977).

Concern continues regarding the change in the self-concept of the handicapped child as a result of mainstreaming. The ongoing effort of educators and administrators regarding mainstreaming and self-concept is to resolve the questions and the concern with effective mainstreaming procedures and techniques.

Mainstreaming

Mainstreaming is the placement of a handicapped student in a regular class with non-handicapped peers (Turnbull & Schulz, 1979). It provides handicapped students with the opportunity for integration into the regular school environment through the use of supplementary aids and services (Mann, 1976).

Johnson and Johnson (1978) stated the CEC's themes of mainstreaming. Mainstreaming is:

1. Providing the most appropriate education for each child in the least restrictive setting.

2. Looking at the educational needs of children instead of at clinical or diagnostic labels such as mentally handicapped, learning disabled, physically handicapped, hearing impaired or gifted.

3. Looking for and creating alternatives that will help general educators serve children with learning or adjustment problems in the regular setting.

4. Uniting the skills of general education and special education so all children may have equal educational opportunity.

Mainstreaming is not:

1. The wholesale return of all exceptional children enrolled in special education classrooms to regular education classrooms.

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

3. Ignoring the needs of some children for a more specialized program that can be provided in the general education program.

4. Less costly than serving children in special self-contained classrooms.

Historically the goal of mainstreaming has been the equalization of human interrelations (Dunn, 1973). Persons who have been considered different have been segregated from the dominant societal group. Martin (1976) states that with this segregation has come a pattern of neglect, isolation, and rejection. The result of this segregation and the accompanying negative attitudes has been social separation (Pendler, 1979). Mann (1976) and Birch (1974) state the goal of mainstreaming is to reduce this separatism so that handicapped people have equal opportunity in academic learning and in socialization.

Advantages of mainstreaming. Mainstreaming is to provide efficacy in education. Students who are mainstreamed learn as well as or better in the mainstream environment than in a more restricted environment such as a self-contained classroom or in a special school (Bradfield, Brown, Kaplan, Rickert, & Stannard, 1973). Johnson (1962) reports that retarded children in regular classes who receive little or no special help perform better academically than those students in special classes. Mainstreaming is designed to promote educational efficacy for the handicapped student (Dunn, 1973; Rubin, Simson, & Betwee, 1966).

A second advantage of mainstreaming is the utilization of educational performance criteria to describe a student (Birch, 1974; Grotzky, Sabatino & Ohrtman, 1976). By using objective criteria to identify a student, disability labeling and stereotyping are eradicated. Performance, rather than disability or stereotypic expectations, is emphasized. Performance emphasis encourages teachers and peers to view capabilities. They view what a student can do, not what a student cannot do and expectations concerning the handicapped student are more realistic (Brophy & Good, 1969; Brophy & Good, 1974; Purkey, 1970). The handicapped student can have a more positive attitude towards him/herself (Blankenship & Lilly, 1981). His/her peers and teachers reflect capabilities rather than disabilities and stereotypes.

A third advantage of mainstreaming is the placement of handicapped children in a school environment with normal children. Here they can participate in the social and educational activities offered by the schools (Gickling & Theobald, 1975). By being able to participate in the social and educational activities of the regular school environment, handicapped children have an opportunity to acquire skills in social competence, social acceptance, and friendship (Asher & Taylor, 1981; Asher & Gottman, 1981).

Mainstreaming, by providing normal experiences, helps lessen the difference of the handicapped student. Reynolds (1978) states that having normal life experiences encourages the handicapped child to model the more appropriate behavior of their more normal peers.

The final advantage of mainstreaming is that it provides normal students with the opportunity to interact with handicapped persons. Nonhandicapped children learn and grow by sharing experiences with a handicapped child (Lasher, Mattick, Perkins, von Hippel, & Hailey, 1978). They learn about and learn to deal with differences in others (Encyclopedia Britannica Educational Corporation, 1980). In interacting with a handicapped person, they will come to realize that there are differences between people. Realizing differences expands tolerance. Schuster (1979) and Mann (1976) state that difference is accepted rather than resisted and feared. The perception of difference and the tolerance of difference influence the maturation of attitudes and feelings (Bookbinder, 1978). Empathy evolves from this deeper development through tolerance and is influential in the establishment of a child's value system and social consciousness (Bookbinder, 1978). Reynolds (1980) states that the overall result of interaction between handicapped and normal peers is increased sympathy and altruism and expanded perspectives.

Disadvantages of mainstreaming. Teachers may limit a student's participation in the regular classroom because of the teacher's own personal bias towards handicapped children. A primary determiner of a teacher's behavior is his/her attitude (Simek, 1979). Teacher attitude and teacher behavior can be described as a cause and effect relationship. The attitude, the cause, influences the effect, the behavior. Teacher attitude affects teacher behavior. Teacher

behavior is the major directive in the performance and achievement of students (Mann, 1976).

Concerning teacher attitude towards handicapped children, Martin (1976) states:

We must recognize that helping teachers to deal with the uniqueness of children is basically an attitudinal problem. It is a problem that touches the belief systems and self-concepts of teachers. Traditionally, in education, we have virtually ignored the barriers to effective teaching caused by our basic fear of difference and change. At most, we have referred to it in an academic context, but we have not developed rich, experiential, educational approaches to cope with these feelings and beliefs. As a result we frequently see differences denied, for they are too troublesome to deal with; or, if they are too great to be denied, we see the children themselves sometimes rejected or excluded (p. 5).

When teachers deny that handicapped children are different and reject or exclude them, the handicapped child will suffer. The child may experience feelings of rejection, inadequacy, or hostility (Pendler, 1979). These negative emotional feelings in turn influence the student's performance academically and socially.

Teacher attitude also influences the student's learning in that his/her educational opportunity may be limited (Bradfield et al., 1973; Gickling & Theobald, 1975; Paul, Turnbull & Cruickshank, 1977; Simek, 1979). If a teacher does not have a receptive attitude towards equal educational opportunity for the handicapped, he/she has little commitment to integrating the child into the classroom. The handicapped child may not be included in all aspects of classroom learning and limited educational opportunities will result in limited learning (Bradfield et al., 1973; Gickling & Theobald, 1975; Paul et al., 1977; Simek, 1979).

A second disadvantage of mainstreaming is that handicapped children are limited from participating in the mainstream because of administrator bias. Administrator bias means that administrators do not appropriate services and instruction to meet the needs of all children. Klausmeier (1976) states that administrators arrange services and instruction to meet instructional needs of a child as they perceive the child. Johnson (1976) further discusses the effect of perception. He states that school administrators are a part of society, and as such, they reflect social mores. Consequently, students are typed according to the socially directed perceptions of these administrators. This perceptual typing may serve the function of actually restricting opportunity for students under the guise of "doing good," improving education, or some other express humanitarian motive. Johnson (1976) feels that persons who have been perceptually classified by an administrator often suffer from inferior services and social exclusion and isolation.

The attitude of the school administrator is highly influential on the attitude of his/her staff. Negative attitudes toward change and integration limits its occurrence. Negative attitudes of school staff toward change and integration may be reflective of their administrator's attitudes (Schmuck, Chesler, & Lippitt, 1966; Simek, 1979).

A third disadvantage of mainstreaming is the possible limited educational participation of the mainstreamed student due to peer bias. The primary characteristic of any handicapped student is

"being different." Johnson and Johnson (1978) state how difference in appearance and performance is viewed. A difference which is not understood is feared and is therefore viewed negatively. A difference which is perceived as inferior is held in contempt and is also viewed negatively. This negative stigmatization of difference results in the social rejection and ostracism of the special student (Asher & Taylor, 1981; Drabman & Patterson, 1981; Gottlieb & Leyser, 1981).

The final disadvantage of mainstreaming is the possible limited educational participation of the mainstreamed student due to the complexity of the actual mainstreaming process. The mainstreaming process is comprised of providing specific services and implementing specific goals for the mainstreamed student (Reynolds, 1976). The provision of services and the implementation of goals can be enumerated in four steps. These four steps are (a) assessing the child, (b) placing the child in the least restrictive environment, (c) managing the child's program, and (d) coordinating the child's curriculum and instruction (Mann, 1976). The execution of these four steps of service provision and goal implementation is a complex process involving many different tasks and many different people.

The organizational variables involved in this complex process of service provision and goal implementation are communication, leadership, decision making, and human resource utilization. These variables were identified by Simek (1979) as having the greatest relationship to integration and change in the mainstreaming process.

These organizational variables involved in service provision and goal implementation must function efficiently for the child to receive adequate services (Schmuck et al., 1966; Simek, 1979).

Self-Concept

Self-concept is a set of perceptions which a person has about him/herself. This set of perceptions consists of the following:

1. Perceptions of the body. For example, I am strong.
 2. Perceptions of the objects or persons which are identified by the subject as "self." For example, my car, my father.
 3. Value judgements concerning these aspects of the self. For example, my car is a super machine, my father thinks I am stupid.
 4. Ideological values which reflect self. For example, I believe being successful means having a lot of money (Meyer, 1979).
- A person's behavior is directed by this system of perceptions. This system directs what a person does, the way he/she feels about self, and the way he/she interacts with others.

Raimy (1975) defines self-concept as a key component of personality. His definition presents self-concept as a personality construct. Raimy states that self-concept is a relatively organized perceptual framework resulting from present and past self-observation. Self-concept is what a person believes about self. Self-concept is a type of map which each person consults in order to understand self, especially during moments of anxiety such as crisis, choice, or change.

Dinkmeyer's (1965) description of self-concept, too, is of a regulatory personality construction. Self-concept serves to integrate and differentiate various learning experiences. Much of an individual's behavior is an attempt to maintain the consistency of his/her self-concept during change. As the child experiences changing life situations, continual evaluation from the constant base of his/her self-concept facilitates the youngster's adjustment. The self-concept is the reference point from which the child makes decisions and personalizes his/her reactions.

Jersild (1960) describes self-concept as follows:

It is a composite of a person's thoughts and feelings, strivings and hopes, fears and fantasies, his views of what he is, what he has been, what he might become, and his attitudes pertaining to his worth (p. 116).

Development of self-concept. This definition of self, self-concept, is essentially a social product which develops gradually. A child's primary need is to find a place for him/herself in society. When a child finds his/her own special place, he/she experiences feelings of acceptance, of adequacy, of security (Erikson, 1963).

The distinctive, individual, unique traits (physical, mental, social, intellectual, moral and personal) of each child influences his/her finding a place for self. The interaction of the child with significant people is also influential in finding a place for self. The general attitude of mother, father, siblings, teacher, peers has a major influence on the child's feelings of adequacy and worth. The constant interaction of the child's own individual traits with

significant others in the home, school, and community provides the basis for the development of self-concept (Ansbacher & Ansbacher, 1956; Snygg & Combs, 1949; Dinkmeyer, 1965; Erikson, 1963; Lewin, 1935; Lowenfeld & Brittain, 1975; Sullivan, 1953).

A child with an adequate self-concept can be characterized by distinct personality features. Snygg and Combs (1949) describe persons with an adequately functioning personality as those who: (a) perceive themselves in essentially positive ways, (b) are capable of acceptance of self and others, and (c) perceive themselves as closely identified with others. This child has a set of positive perceptions of him/herself which gives him/her courage to function. He/she is open to experiences and is free to choose selectively. Self-assessment is honest and accurate. This child is spontaneous, original, and freely functioning. He/she trusts him/herself and is free to accept others with positive anticipation that social interaction will provide a good experience (Dinkmeyer, 1965; Lasher et al., 1978).

A child who is not developing an adequate self-concept has negative feelings about him/herself as being unwanted, incompetent, inferior, unacceptable. The many negative definitions of self lessen courage to meet the challenging tasks of life. Life is seen as a constant threat. Being threatened, the child overreacts. He/she may try too hard, brag too much, may focus on ways to prove personal adequacy. He/she may have inflexible behavior patterns.

His/her view of life makes him/her generally unsuccessful in interpersonal relationships (Dinkmeyer, 1965; Lasher et al., 1978; Sarason & Spielberger, 1976).

Mainstreaming and Self-Concept

Research on the changes in self-concept as a result of mainstreaming provides varied findings from three major perspectives. These three major perspectives are as follows:

1. There is no significant relationship between school placement and self-concept.
2. A special student has a more positive self-concept in a segregated or self-contained classroom.
3. A special student has a more positive self-concept in a desegregated or mainstreamed classroom.

Van Putte (1979) reports on the investigated relationship between school setting and self-concept in 20 school-age, physically disabled children. These students, having myelomeningocele, were chosen as a physically disabled but mentally competent population. Ten of the students were in a self-contained class in a sheltered setting and ten of the students were mainstreamed. The students were tested with the Piers-Harris Children's Self Concept Scale. The small sample pilot study did not show any significant relationship between school setting and self-concept.

Carvajal (1972) provides a comparative study of the effect of integration and segregation on the self-concept of 100 educable mentally retarded adolescents. Fifty students were

selected from an integrated setting and 50 from a segregated setting. The four testing criteria were the following: (a) I see myself as, (b) my friends see me as, (c) my parents see me as, and (d) most of my teachers see me as. Carvajal concludes that variables of teacher preparation, curriculum, and educational setting were insignificant in the development of self-concept of special students. He therefore concludes that physical setting was insignificant in self-concept development.

McGarvie (1970) reports on the self-concept of adolescent educable retarded students. McGarvie evaluates 50 adolescents from varied schools, using a self-concept measure, The Index of Adjustment and Values. McGarvie identifies I. Q. and teacher estimate of self-concept as the most influential variables with regard to self-concept. However, he concludes that early special class placement did not influence a more positive self-concept.

Clifford and McKinney (1974) evaluate a three-year project focusing on the effect of three different classroom settings on the self-concept of 38 students. These students range from 8 to 13 years of age and have been identified as educable mentally retarded. The classroom settings were (a) a graded open classroom with a resource teacher, (b) a multigrade open classroom emphasizing individualized instruction, and (c) two self-contained special education classrooms. The effect of classroom placement on self-concept, achievement, attitudes, and classroom behavior was measured. Self-concept was measured by a structured interview and a self-concept

questionnaire. Analysis of pre- and posttest measures of self-concept do not demonstrate that one setting is superior to another in producing meaningful gains in self-concept.

Boersma, Chapman, and Battle (1979) report on a study comparing 68 full-time special class students and 83 regular class public elementary students ranging between 8 and 12 years of age. The objective of the study was to compare changes in academic self-concept of two full-time special education groups with normally achieving children. Fifty of the special students were receiving remedial assistance for severe learning disabilities; 18 of the special students were in classes for educable mentally handicapped children. Academic self-concept was assessed by The Student's Perception of Ability Scale. The results of the study show that full-time special class placement improves academic self-concept.

Strang, Smith, and Rogers (1978) report on a comparative study focusing on the influence of reference groups and of duration of special class placement on self-concept. These academically handicapped students having learning problems were compared with regular class children. Results show that self-concepts of special students are influenced by whether special class placement is full-time or part-time. Self-concepts are higher when other special children are the main reference group. Self-concepts decline when self-comparisons are restricted to regular class children.

Schurr, Towne, and Joiner (1972) conduct a time series study in two phases over a two-year period. The first phase includes

testing 62 educable mentally retarded students prior to special class placement and during the first year of placement. The second phase includes extending and replicating parts of the study, again testing during the second year of class placement. The self-concept test used was The Michigan State University Self-Concept of Academic Ability Scale. Findings show an increase in self-concept during the first year of placement and a continuing increase during second year placement.

Carroll (1967) studies the effects of two types of school programs, segregated and partially integrated, on the self-concept of 39 educable mentally retarded students. The students are compared through pre- and posttest scores from The Illinois Index of Self Derogation. The results of the study show that special children in a partially integrated setting show more improvement in self-concept than special children in a totally segregated setting during one academic year. It is concluded that the type of school program provided for the educable mentally retarded child does have an effect on self-concept.

Scott (1977) reports on the mainstreaming of 75 educable mentally retarded students into regular classrooms in a comprehensive high school. The program focuses on goals of emotional, social, and economic adjustment. Pre- and posttest scores from the Multi-purpose Scale, Form 414, School District of Philadelphia, are compared in evaluating self-concept. Scores indicate a maintenance or an improvement of self-concept in all of the 75 students during the 6-month mainstreaming period.

Lawrence and Winschell (1973) present a review of research and issues concerning educable mentally retarded students and self-concept. They report no difference in self-concept among educable mentally retarded students who experience varied duration of special class placement as reported by Mayer (1966), and McGarvie (1970). Lawrence and Winschell report increased self-concept scores during a one-year special class placement by Towne and Joiner (1966), and a continued self-concept increase of these same students as tested by Schurr in 1967. Lawrence and Winschell report increased self-derogation among totally segregated special students as studied by Carroll (1967). As reported through Lawrence and Winschell, Bacher (1965) and Knight (1968) found no significant self-concept differences between special class and regular class placement of special children. Lawrence and Winschell summarize their study on class placement and self-concept by stating that segregation does not appear to contribute to the positiveness of self-concept. They do describe these findings as tentative, however, and state that the findings warrant guarded conclusions only.

Statement of the Problem

Research in the area of mainstreaming and self-concept has focused primarily on the mainstreaming of a single student into a regular education environment. Relatively little research has focused on the effect of the preparation and movement of an entire class (including teacher and teacher's aide) into the mainstream on student self-concept.

This study investigates the influence on self-concept of mainstreaming when using programs to train for mainstreaming and a technique to assist student adjustment during mainstreaming. The training programs for mainstreaming included training the students for mainstreaming and training the regular education school for receiving the mainstream students. The mainstreaming technique was designed to ease the transition of the mainstreamed student from the current placement to his/her new placement. Student preparation, mainstream school preparation, and a special mainstreaming technique were all utilized in an attempt to stabilize the student's self-concept.

Definition of Terms

Following are terms of specific importance to this research study:

1. Mainstreaming: the movement of a handicapped student from a more restricted environment (hospitals and treatment centers, hospital schools, residential schools, special day schools, full-time special class) towards placement in a regular classroom.

2. Self-concept: a set of perceptions which a person has about him/herself which directs what a person does, the way he/she feels about self, and the way he/she interacts with others as measured by scales quantifying how a person perceives his/her academic performance ability, how a person perceives his/her academic performance ability in relation to peers, and how a person perceives qualities he/she likes and dislikes about him/herself

(behavior, intellectual and school status, physical appearances and attributes, anxiety, popularity, and happiness and satisfaction).

3. Infusion mainstreaming: a technique of slowly and gradually introducing students to experiences encountered in a regular classroom and gradually reducing the experiences encountered in a self-contained classroom.

Hypotheses

The research question addressed in this study is do changes occur in the self-concept of handicapped adolescents receiving training for mainstreaming and being mainstreamed with the infusion mainstreaming technique?

The following null hypotheses will address the question concerning self-concept and mainstreaming:

1. There will be no significant change in the students' perception of their ability to perform seven common classroom activities as measured by The School Activity Scale (Dickinson & Workman, 1979) following training for mainstreaming and mainstreaming with the infusion technique.

2. There will be no significant change in the students' perception of their ability compared to other students to perform seven common classroom activities as measured by The Relative School Activity Scale (Dickinson & Workman, 1979) following training for mainstreaming and mainstreaming with the infusion technique.

3. There will be no significant change in the students' perception of their dislikes about self as to behavior, intellectual

and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction as measured by The Children's Self-Concept Scale (Piers & Harris, 1964) following training for mainstreaming and mainstreaming with the infusion technique.

4. There will be no significant change in the teacher's perception of the students' self-concept as measured by a Teacher Attitude Scale following training for mainstreaming and mainstreaming with the infusion technique.

CHAPTER 2

METHODS AND PROCEDURES

Subjects

The subjects in this study consisted of 13 children attending a self-contained class at a comprehensive rehabilitation center located in East Tennessee.

All students had been diagnosed as being emotionally disturbed and/or behaviorally disordered as the primary handicapping condition. This diagnosis was determined by the intake history, teacher rating scales and therapists' observations and reports. The secondary handicapping condition of the students was a classification of learning disability. Five of the students were multiply handicapped, having presented more than two disabilities of either emotional disturbance, behavior disorder, learning disability or mental retardation (see Table 1).

Tests of academic performance of the students ranged from 1.3 to 6.8 in reading. Math performance levels ranged from 1.7 to 7.7. All students functioned below the expected grade levels (see Table 2).

The subjects, ranging in age from 11 to 15 years, consisted of 10 males and 3 females. These 13 subjects came from varied home situations. Six of the subjects came from two-parent homes. Three came from single parent homes. Three of the subjects lived in foster homes and one lived with a sister.

TABLE 1
HANDICAPPING CONDITIONS OF EXPERIMENTAL STUDENTS

Student	Age	Diagnosis			I.Q.
		Learning Disability	Emotional Disturbance	Behavioral Disorder	
1	11		x	x	99
2	13		x	x	112
3	15		x	x	110
4	12		x		69
5	11	x		x	89
6	14	x	x	x	75
7	12	x	x		80
8	14	x	x	x	96
9	13	x	x	x	73
10	12	x	x		78
11	15		x	x	71
12	12		x	x	83
13	13	x	x	x	74

TABLE 2
EXPERIMENTAL STUDENTS ACADEMIC PERFORMANCE LEVELS

Student	Reading Grade Level	Math Grade Level
1	6.0	4.9
2	6.8	7.7
3	6.1	5.2
4	3.0	3.0
5	2.8	3.0
6	2.6	4.5
7	3.2	2.9
8	3.1	3.0
9	3.2	3.2
10	3.4	3.2
11	1.3	1.7
12	3.0	3.0
13	3.0	4.7

Problem behaviors which these 13 displayed ranged from aggressive to disruptive. Inappropriate behaviors displayed were the following: (a) fighting or arguing, (b) not completing work, (c) talking without permission, (d) not remaining in seat, (e) disruptive hall, cafeteria, and bathroom behavior (yelling, running), (f) not responding on first request, (g) backtalking, (h) teasing, (i) destroying school property, and (j) threatening.

These 13 students attended a special school at a comprehensive rehabilitation center which provided evaluation and therapeutic services to clients of varied ages and disabilities.

The students attended class in a self-contained, highly structured special education environment. The students' program followed an educational treatment model. Both education and therapy were provided in and around the classroom environment. Special education focused on individualized instruction in basic subject areas. Behavior management strategies included classroom management and individual behavior intervention. Therapy also included group process activities, individual counseling, and sociodrama.

Instruments

Several different instruments were used to measure student and teacher attitude. Three instruments were used to measure the change in self-attitude of the students after being mainstreamed. A teacher attitude scale was used to measure the teacher's perception of the students' self-concept. All four instruments used were

self-report measures. The four instruments were used as pre- and post-mainstreaming measures.

The School Activity Scale (Dickinson & Workman, 1979) (see Appendix A) was used to evaluate a student's self-attitude on school performance. The student was to rate him/herself in doing each one of nine subject area activities. This provides a measure of how a student sees him/herself performing in school. This scale evaluates self-attitude of performance in academic activities in nine subject areas. These subject area activities are the following: (a) solving math problems, (b) spelling, (c) drawing in art class, (d) playing games during gym or recess, (e) reading in the social studies book, (f) reading the language book, (g) writing school assignments, (h) reading the science book, and (i) singing in music class. The student was asked to rate on a five-point scale how she/he performed on each one of the subject area activities. The student was required to rate whether he/she performed super well, pretty well, average, poorly or awful on each of the academic activities.

Concurrent validity for The School Activity Scale was established by using teacher rankings of student's self-concept as a criterion for validity. A correlation coefficient of .80 was obtained for a group of 28 fifth grade students (Workman, 1979).

Test-retest reliability for The School Activity Scale was established as part of this study using 152 middle-school students in grades 6, 7, and 8. A retest after a two-week period resulted in coefficients of .66, .67, and .46, respectively.

The Relative School Activity Scale (Dickinson & Workman, 1979)

(see Appendix B) was used to evaluate student self-attitude on school performance in relation to his/her peers. That is, the student was to rate him/herself in doing each of the activities as she/he would compare or rate oneself with other students in the class. This provides a measure of how a student sees him/herself performing in school in relation to other students. This scale evaluates self-attitude of performance in academic activities in nine subject areas compared to performance by other students on these same nine subject area activities. These subject area activities are the following: (a) solving math problems, (b) spelling, (c) drawing in art class, (d) playing games during gym or recess, (e) reading the social studies book, (f) reading the language book, (g) writing school assignments, (h) reading the science book, and (i) singing in music class. The student was asked to rate on a five-point scale how he/she performed on each one of the subject area activities as compared to other students in the class. The student was required to rate that she/he performed super well, pretty well, average, poorly, or awful on each of the academic activities as compared to other students.

Concurrent validity for The Relative School Activity Scale was established by using teacher rankings of student's self-concept as a criterion for validity. A correlation coefficient of .80 was obtained for a group of 28 fifth-grade students (Workman, 1979).

Test-retest reliability for The Relative School Activity Scale was established as part of this study using 152 middle-school students in grades 6, 7, and 8. A retest after two weeks resulted in coefficients of .92, .46, and .82, respectively.

The Children's Self-Concept Scale (Piers & Harris, 1964) (see Appendix C for pretest and Appendix D for posttest) was used to evaluate self-concept. Factors measured were behavior, intellectual and school status, physical appearances and attributes, anxiety, popularity, and happiness and satisfaction. This scale was intended to measure the subjects' concerns about qualities they liked and disliked about themselves (Piers, 1964).

The coefficients for internal consistency on The Children's Self-Concept Scale (Piers & Harris, 1964) have been reported to be within the range of .78 and .93 using the Kuder-Richardson Formula 21 (Piers, 1964). Test-retest coefficients for stability are reported to be between .71 to .77 (Piers, 1964). Although alternative measures have been developed for measuring children's self-concept, the Piers-Harris scale remains an instrument often used in self-concept research.

The Teacher Attitude Scale (see Appendix E) was used to assess the teacher's perception of the student's self-concept. This scale is a three-point self-report instrument. The teacher can state his/her perception of the student's self-concept by giving a rating falling between poor and good.

Assessment of self-attitude and teacher-attitude before mainstreaming. Three self-attitude inventories were given to the

students in the experimental class at two different times. The first attitude assessment was on April 21, 1981. The students were given the inventories before they were to be mainstreamed on April 24, 1981.

The first self-attitude inventory administered was The School Activity Scale (Dickinson & Workman, 1979). The students were then given a short break. The second self-attitude scale administered was The Relative School Activity Scale (Dickinson & Workman, 1979). The students again were given a short break. The final self-attitude scale administered was The Children's Self-Concept Scale (Piers & Harris, 1964).

Each of the inventories was administered to the experimental class by the experimental class teacher in their classroom at the special school. These steps were followed in administering the inventories:

1. Each of the inventories was administered to the experimental students as a group.
2. On each inventory the teacher read the instructions to the students.
3. On each inventory the teacher read every item twice to the students as they progressed through the scale.
4. On each inventory the teacher allowed time so that each student could respond at his/her own pace.
5. Each inventory was color or number coded to assure student anonymity.

The experimental class teacher completed The Teacher Attitude Scale on April 21, 1981 at the special school.

Assessment of self-attitude and teacher attitude at the close of mainstreaming. The same three self-attitude inventories given to the experimental students before they were mainstreamed were given to the experimental students in the same manner, before the close of school, on May 26, 1981. The experimental class teacher also completed The Teacher Attitude Scale on May 26, 1981.

Procedure

The procedure followed in this study consisted of two components. The first component discussed in this section is the training for mainstreaming. The second component discussed is the infusion mainstreaming technique. Both of these components were utilized in the preparation and movement of the 13 experimental students from the special school to the mainstream (regular) school.

Training for mainstreaming. Preparation was made throughout the school year for the mainstreaming of the 13 students in the experimental class. Training included a special education (self-contained) classroom program utilizing behavior management techniques, group process activities, individual counseling, sociodrama, and mainstream awareness. Training also included a program providing training and consultation for the staff at the special school and the mainstream school.

The objectives of the self-contained classroom program were:

1. To increase the level of appropriate behavior exhibited by individual students and classroom groups.
2. To provide classroom group counseling and behavior management on a regular basis.
3. To maximize the academic achievement of all students.
4. To return as many children as possible to a less restrictive environment.

Various activities were designed and implemented to achieve these four objectives (Girdler, Hutchison, Aebischer, & Griffin, 1982).

The classroom teacher and a consulting school psychologist designed classroom behavior management strategies and individual behavior interventions (see Appendix F for teacher's behavior checklist and consequences) to remediate individual student problems identified by baseline data (Girdler et al., 1982). These interventions were primarily implemented by the classroom teacher and the classroom aide. All center personnel working with the experimental students (rehabilitation counselors, clinical social workers, special educators, special education consultants, and school psychologists) consistently implemented the behavior management program. Continual data documented child change and generalizability of treatment gains from October through May (Girdler et al., 1982) see Appendix G and H for table and graph of experimental student behavioral change).

Two group counseling sessions per week were a part of the regular classroom program. These sessions were facilitated by the classroom teacher and a classroom consultant who was a clinical social worker. Group discussions focused on individual behavior problems, developmental issues, communication and listening skills, parent-child conflicts, and mainstream awareness (see Appendix I for mainstream awareness discussion topics). Students recorded and charted their performance on the daily behavior checklist (see Appendix J for daily behavior checklist) and graphed and analyzed the cumulative data (Girdler et al., 1982). Individual counseling on an unscheduled basis was available at any time for each of the experimental students.

The experimental students were evaluated academically and an Individual Educational Program was developed for each of the experimental students. Math and reading instruction was in small groups. Individual work folders focused on remediation of specific skill deficits.

As the experimental student's academic skills progressed, the class was conducted more like a regular classroom. The experimental students worked in larger groups. Greater emphasis was placed on skill application. Homework became a regular activity.

Sociodrama was used to promote student awareness of the mainstream experience. These sociodrama sessions utilized the completion of unfinished stories about mainstreaming, group discussions (see

Appendix I for mainstream awareness discussion topics), and videotaping and reviewing to assist in developing mainstream readiness. Progress on student readiness was monitored by the use of a mainstreaming skills checklist.

Training and consultation was provided to the staff at the special school and at the mainstream (regular) school. The special school normally shared the consultation of special educators, social workers, case managers, and rehabilitation personnel. Three additional consultants worked closely with the special school staff. Two of the additional consultants were county school psychologists. The third consultant was an education specialist in emotional disturbance.

At the special school the regular and the additional consultants were involved in weekly staff meetings. The consultants were available for assessment, observation, diagnosis, and program planning. They provided weekly in-service training sessions for teacher aides in behavior management. Education in emotional disturbance through classroom consultation was also provided for staff working with emotionally disturbed clients. Biweekly group therapy with the experimental students was facilitated by a consultant. Individual counseling whenever needful was provided by the consultants (Girdler et al.; Schindler, 1981; Sloan, 1981).

Training and consultation by the education specialist at the mainstream school focused on education in emotional disturbance and in mainstreaming. The consultant was available for formal (in-

service training) and informal (teacher's lounge conversations, P. T. A. meetings, classroom observations and consultations) training sessions. This consultant was the mainstream coordinator, preparing the regular school for receiving the 13 mainstream students (Schindler, 1981; Sloan, 1981) (see Appendix K).

Infusion Mainstreaming

On Friday April 24, 1981 the students, teacher, and aide moved from the comprehensive rehabilitation center into a regular elementary school setting as one unit, utilizing a technique called "infusion" (Schindler, 1981; Sloan, 1981). Infusion is a technique to ease the transition of the mainstreamed students from the current placement to his/her new placement.

The goal of the infusion mainstreaming technique was to help the experimental students adjust during the transition to the mainstream (regular) school. The purpose of the technique was to facilitate the student's adjustment to the regular classroom by retaining familiar elements of the student's self-contained class and gradually introducing features of the new regular school environment. Following are examples of familiar elements which were retained and of new elements which were gradually introduced to the experimental students (see Figure 1).

1. Support system--The experimental students' teacher, teacher's aide, and therapist continued to work with the experimental students after the transfer to the mainstream (regular) school.

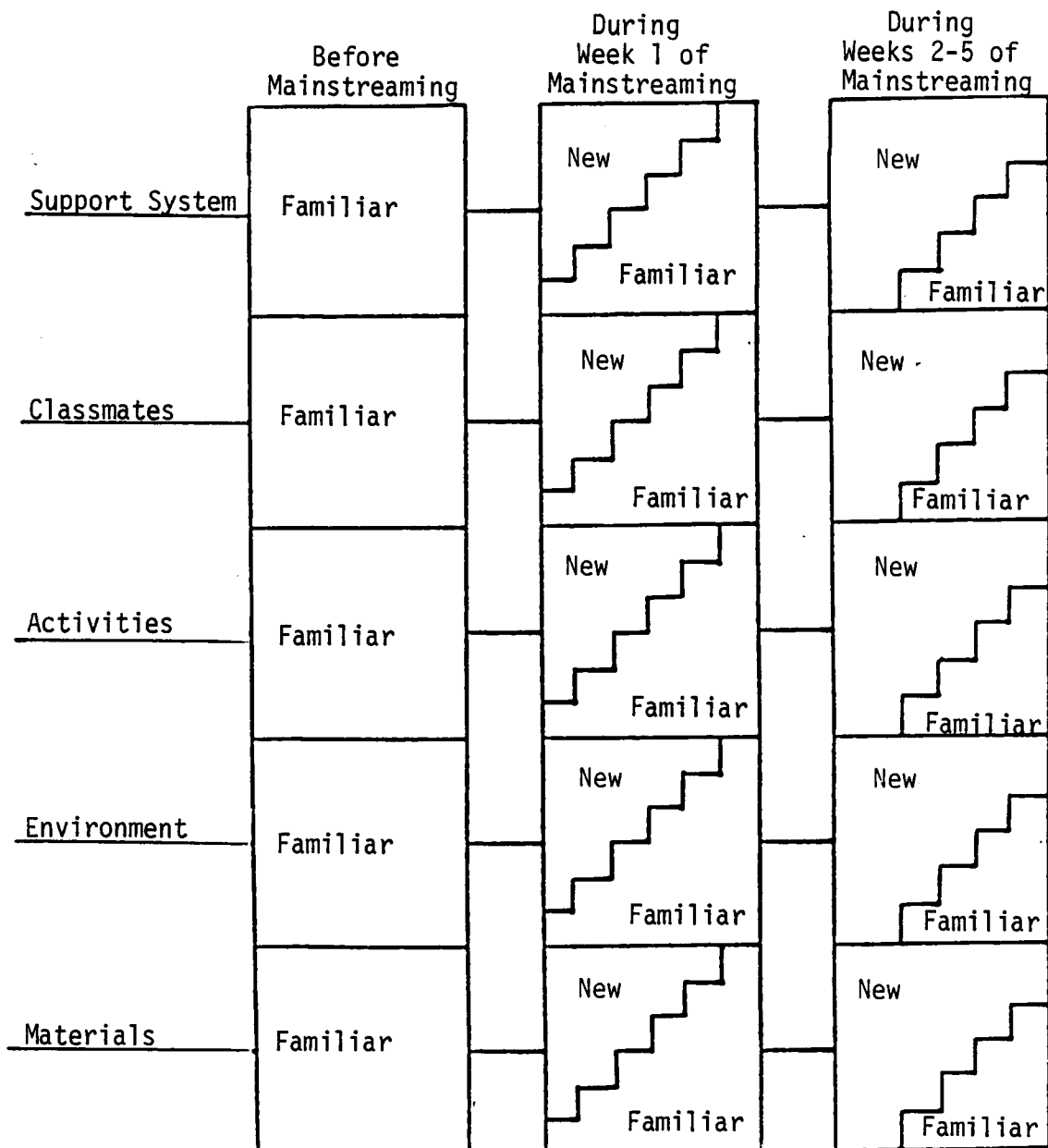


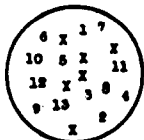
Figure 1. Experiences of the experimental students during mainstreaming with the infusion technique.

2. Classmates--The experimental students still shared academic and social experiences together after the transfer to the mainstream (regular) school.

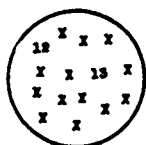
New classmates were introduced gradually. Six new classmates came to visit the experimental classroom for resource help between April 27 and May 1 while the experimental class still remained together as a class for academics. The experimental students had lunch, physical education class, and playground activities with new classmates from April 27 through May 28. During lunch, P. E., and playground activities, the experimental students experienced free-choice situations. The experimental student could freely decide to remain with his/her experimental classmates or to mix with new classmates from the mainstream (regular) school.

Eleven of the experimental students took classes with new classmates in mainstream (regular) classes for varying time durations between May 4 and May 28. Two of the experimental students were in class with new classmates in the experimental classroom as 1 to 13 students visited the experimental classroom for resource help for varying time durations between May 4 and May 28 (see Figure 2).

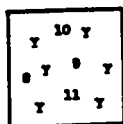
3. Activities--The experimental students continued to participate in activities together which they had shared as a group before the transfer to the mainstream (regular) school. The experimental classroom was their homeroom class. During homeroom the experimental students shared group therapy activities and values clarification activities.

Week 1: April 27-May 1

Thirteen experimental students remained in the experimental classroom. One to 6 students from the mainstream (regular) school came to the experimental class for resource help for 30 minutes to 1 hour.

Weeks 2 Through 5: May 4-May 28

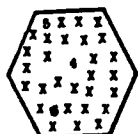
Two experimental students remained in the experimental classroom. One to 13 students from the mainstream (regular) school came to the experimental class for resource help for varying time periods in accordance to his/her need for assistance (either 1 or 2 hours).



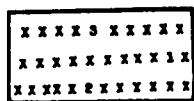
Four experimental students went into the mainstream (regular) school resource class for varying time periods in accordance with his/her performance skills (either 1 or 2 hours).



One experimental student went into the mainstream (regular) school 4th grade class for increasing time periods as his/her performance skills increased (from 1 hour to 3 hours).



Three experimental students went into the mainstream (regular) school combination 5th and 6th grade class for increasing time periods as performance skills increased (from 1 hour to 3 hours).



Three experimental students went into the mainstream (regular) school 6th grade class for increasing time periods as performance skills increased (from 1 hour to 3 hours).

Figure 2. Daily academic placement schedule of experimental students.

(Numbers 1 through 13 represent the experimental students. The x's represent regular education students; y's represent resource class students; circles represent the experimental classroom; squares represent the resource classroom; triangles, hexagons, and rectangles represent regular education classrooms.)

New activities were introduced gradually. Socially oriented activities of lunch, P. E., and playground activities were introduced. Later more performance oriented tasks of academics were introduced. The duration of academic encounters by the experimental class in regular classes increased gradually as the student became oriented to his/her environment. The number of regular students visiting the experimental class for resource help gradually increased (see Figure 2).

4. Environment--The experimental student's familiar environment, the special school, was experienced consistently after the transfer to the mainstream (regular) school. The experimental students spent time daily at the special school and at the mainstream (regular) school (see Table 3).

5. Materials--The experimental students' familiar classroom materials were still used consistently during academics after the transfer to the mainstream (regular) school. New materials from the mainstream (regular) school were gradually intermingled.

The goal of mainstreaming the experimental students with the infusion mainstreaming technique was to help the experimental students gradually adjust to a new support system, new classmates, new activities, a new environment, and new materials. This was achieved through gradual change. Following are the steps in this experimental mainstreaming effort using the infusion technique (see Figure 3).

TABLE 3
EXPERIMENTAL CLASS DAILY TIME SCHEDULE

8:30 - 9:30	Special school
9:30 - 9:45	Bused to mainstream (regular) school
10:00 - 2:00	Mainstream (regular) school
2:00 - 2:15	Bused to special school
2:15 - 3:00	Special school
3:00	Left for home

More
Involvement



Less
Involvement

5. Eleven experimental students joined other classes for academics for varying lengths of time. One to 13 regular students came to the experimental classroom for resource help for varying time periods, May 4-May 28.
4. The experimental class remained together as a class for academics. Six regular students came to the experimental classroom for resource help for varying time periods, April 27-May 1.
3. The experimental students joined regular classes for lunch, physical education class, and playground activities, April 27-May 28.
2. Experimental students spent time daily at the special school and at the mainstream (regular) school with their teacher and teacher's aide, April 27-May 28.
1. Transfer of experimental class, teacher, and teacher's aide to mainstream (regular) school on April 24.

Figure 3. Mainstreaming the experimental students using the infusion mainstreaming technique.

(Illustration of the gradual increase of new experiences and of the continuing retention of familiar experiences.)

1. The experimental class, their teacher and teacher's aide, and the classroom materials transferred to the mainstream (regular) school on April 24.

2. The experimental class, their teacher and teacher's aide, from April 24 through May 28, spent 2 hours at the special school and 4 hours at the mainstream (regular) school.

3. The 13 experimental students joined regular classes from April 24 through May 28 for lunch period, physical education class and playground activities.

4. From April 24 until May 1 the experimental class remained together as a class for academics. Six students from the mainstream (regular) school came to the experimental classroom to visit for resource help for varying lengths of time.

5. From May 4 through May 28 eleven experimental students joined other classes for academics for varying lengths of time. One to 13 students from the mainstream (regular) school came to the experimental classroom to visit for resource help for varying lengths of time.

The experimental class attended the mainstream (regular) elementary school from April 24 until the close of school. The larger portion of the students' school day, 4 hours, was spent at the mainstream (regular) school. Academic, therapeutic, and social activities were part of the students' program at the mainstream (regular) school.

The mainstreaming process concluded on May 28, 1981 with the close of school for summer vacation.

CHAPTER 3

RESULTS

This chapter will present statistical tests of the four hypotheses. Each hypothesis will be treated separately and results will be integrated in Chapter 4.

Hypothesis 1

Hypothesis 1 states that there will be no significant change in the students' perception of their ability to perform seven common classroom activities, as measured by The School Activity Scale (Dickinson & Workman, 1979), following training for mainstreaming and mainstreaming with the infusion technique. The School Activity Scale (Dickinson & Workman, 1979) evaluated self-attitude on school performance. The student was to rate him/herself in doing each of nine subject area activities. This provided a measure of how a student sees him/herself performing in school. The scale evaluated self-attitude of performance in academic activities in nine subject areas. Means and standard deviations of pre- and post-mainstreaming self-concept scores were computed. Differences between means were analyzed by use of a t test for correlated samples (Neter, Wasserman, & Whitmore, 1978).

Table 4 presents results of the calculated t value based upon a comparison of the pre- and post-means for correlated samples.

TABLE 4
t TEST FOR PRE- AND POST-SELF-CONCEPT RATINGS
OF THE EXPERIMENTAL STUDENTS AS MEASURED
BY THE SCHOOL ACTIVITY SCALE

M (Pre)	SD	M (Post)	SD	t
30.45	9.71	35.57	3.95	1.31

The first null hypothesis, that there would no no significant change in the students' perception of their ability to perform seven common classroom activities following training for mainstreaming and mainstreaming with the infusion technique, was accepted.

Table 4 shows that the experimental students had a mean increase in academic self-concept of 5.15 which is not significant at the .05 level.

Hypothesis 2

The second hypothesis states that there will be no significant change in the students' perception of their ability compared to other students to perform seven common classroom activities, as measured by The Relative School Activity Scale (Dickinson & Workman, 1979) following training for mainstreaming and mainstreaming with the infusion technique. The Relative School Activity Scale (Dickinson & Workman, 1979) evaluated student self-attitude on school performance in relation to his/her peers. That is, the student rated him/herself in doing each one of the activities as he/

she would compare or rate oneself with other students in the class. This provided a measure of how a student sees him/herself performing in school in relation to other students. This scale evaluates self-attitude of performance in academic activities in nine subject areas compared to performance by other students on these same nine subject area activities. Means and standard deviations of pre- and post-mainstreaming self-concept scores were computed. Differences between means were analyzed by use of a t test for correlated samples (Neter, Wasserman, & Whitmore, 1978).

Table 5 presents results of the calculated t value based upon a comparison of the pre- and post-means for correlated samples.

TABLE 5
t TEST FOR PRE- AND POST-SELF-CONCEPT RATINGS OF THE
EXPERIMENTAL STUDENTS AS MEASURED BY THE RELATIVE
SCHOOL ACTIVITY SCALE

M (Pre)	SD	M (Post)	SD	t
34.16	10.46	35.83	5.38	.39

The second null hypothesis that there would be no significant change in the students' perception of their ability compared to other students to perform seven common classroom activities following training for mainstreaming and mainstreaming with the infusion technique was accepted.

Table 5 shows that the experimental students had a mean increase of 0.66 in academic self-concept which is not significant at the .05 level.

Hypothesis 3

The third null hypothesis states that there will be no significant change in the students' perception of their dislikes about self as to behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction, as measured by The Children's Self-Concept Scale (Piers & Harris, 1964), following training for mainstreaming and mainstreaming with the infusion technique. Means and standard deviations of pre- and post-mainstreaming self-concept scores were computed. Differences between means were analyzed by use of a t test for correlated samples (Neter, Wasserman, & Whitmore, 1978).

Table 6 presents the results of the calculated t value based upon a comparison of the pre- and post-means for correlated samples.

The third null hypothesis, that there would be no significant change in the students' perception of their likes and dislikes about self as to behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction following training for mainstreaming and mainstreaming with the infusion technique, was accepted.

TABLE 6

t TEST FOR PRE- AND POST-SELF-CONCEPT RATINGS OF THE
EXPERIMENTAL STUDENTS AS MEASURED BY THE
CHILDREN'S SELF-CONCEPT SCALE

M (Pre)	SD	M (Post)	SD	t
26	5.67	23	5.67	1.47

Table 6 shows that the experimental students had a mean decrease in overall self-concept of 3.00 which is not significant at the .05 level.

Hypothesis 4

The final null hypothesis states that there will be no significant change in the teacher's perception of the students' self-concept as measured by The Teacher Attitude Scale following training for mainstreaming and mainstreaming with the infusion technique. Means and standard deviations of pre- and post-mainstreaming teacher attitude scale were computed. Differences between means were analyzed by use of a t test for correlated samples (Neter, Wasserman, & Whitmore, 1978).

Table 7 presents results of the calculated t value based upon a comparison of the pre- and post-means for correlated samples.

The fourth null hypothesis that there would be no significant change in the teacher's perception of the students' self-concept as

TABLE 7

t TEST FOR PRE- AND POST-TEACHER'S PERCEPTION OF
THE EXPERIMENTAL STUDENTS' SELF-CONCEPT AS
MEASURED BY THE TEACHER ATTITUDE SCALE

M (Pre)	SD	M (Post)	SD	t
1.31	.49	2.38	.88	.39

measured by The Teacher Attitude Scale following training for mainstreaming and mainstreaming with the infusion technique was accepted.

Table 7 shows that the experimental students' teacher had a mean increase in perception of the experimental students' self-concept of 1.07 which is not significant at the .05 level.

CHAPTER 4

SUMMARY OF FINDINGS, CONCLUSIONS, AND DISCUSSION

This chapter reviews the statement of the problem and the methodology used in this study. This chapter also contains the findings as they related to the hypotheses of the study and the major conclusions drawn from these findings.

Background Information about the Study

The major problem addressed in this study was the effect of the preparation and movement of an entire class (including teacher and teacher's aide) into the mainstream on student self-concept. Observation was made of the influence on self-concept of mainstreaming when using programs to train for mainstreaming and a technique to assist student adjustment during mainstreaming. The training programs for mainstreaming included training the students for mainstreaming and training the regular school for receiving the mainstream students. The mainstreaming technique was designed to ease the transition of the mainstreamed student from the current placement to his/her new placement. Student preparation, mainstream school preparation, and a special mainstreaming technique were all utilized in an attempt to stabilize student self-concept.

The primary strategy for data collection was the administration of three self-report, self-concept measures to the experimental students and one self-report, attitude scale, per student, to the

experimental teacher. All four measures were administered pre- and post-implementation of the mainstreaming technique. However, test data was not analyzed on all students. First, due to school absence, pre- and post-data was not available on all students. Hence, neither pre- nor post-test scores could be utilized as data. Second, due to the normal curve distribution, scores falling more than three standard deviations below the mean, the outliers, were excluded. These depressed scores fell outside the probability limits and were discarded. Consequently, 7 pre- and post-scores were analyzed from The School Activity Scale, 6 from The Relative School Activity Scale, 11 from The Children's Self Concept Scale, and 13 from The Teacher Attitude Scale.

The overall findings of this study support the hypotheses that there would be no significant change in self-concept following training for mainstreaming and mainstreaming with the infusion technique. Findings supported the following:

1. There was no significant change in the students' perception of their ability to perform nine common classroom activities, as measured by The School Activity Scale (Dickinson & Workman, 1979), following training for mainstreaming and mainstreaming with the infusion technique.

2. There was no significant change in the students' perception of their ability compared to other students to perform nine common classroom activities, as measured by The Relative School Activity Scale (Dickinson & Workman, 1979), following training for

mainstreaming and mainstreaming with the infusion technique.

3. There was no significant change in the students' perception of their dislikes about self as to behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction, as measured by The Children's Self-Concept Scale (Piers & Harris, 1964), following training for mainstreaming and mainstreaming with the infusion technique.

4. There was no significant change in the teacher's perception of the students' self-concept as measured by a teacher attitude scale following training for mainstreaming and mainstreaming with the infusion technique.

Several possible explanations may be advanced as to the lack of significant difference in the pre- and post-self-concept scores. One explanation of the non-significant results is the number of subjects involved in the study. The group of experimental students was composed of 13 children. In addition, available scores from the children's measures reduced the set of data considerably. In fact, on two of the measures only six scores in one case and seven in another were available. A significant statistical difference is very hard to obtain with such a small sample size.

The lack of significant change in the students' self-concept may have been a result of the short duration of the testing interval. The testing interval from pre-test to post-test was 35 calendar days, with the self-concept assessment taking place prior to mainstreaming and at the close of the mainstream experience. The more

revealing time to have assessed self-concept may have been prior to training for mainstreaming and at the close of the mainstreaming experience. The students received the special education program providing behavior management techniques, group process activities, individual counseling, sociodrama, and mainstream awareness from the beginning of school in September. These components of the students' comprehensive program possibly affected the students' self-concept gradually over time. Had the timing of the self-concept assessment been prior to training for mainstreaming and at the close of the mainstream experience, the change in self-concept may have been significant. Therefore, the short duration of the testing interval may have been partly responsible for the lack of observable change in self-concept in the experimental students.

Problems inherent in assessing a special population may have influenced results of the study. Handicapped students, particularly emotionally disturbed and learning disabled students, usually display variance in academic performance levels. One subject area performance level may exceed another subject area performance level by numerous grade levels. This high variability in performance levels would be reflected by high variability in scores on the self-concept scales which assessed academic self-concept. Indeed, wide scatter was observable in an analysis of performance on each individual scale. The wider the scatter of scores on an assessment device, the larger the standard deviation. Rather substantial standard deviations were observable on several of the individual

scales. Standard deviations on the pre-test of The School Activity Scale (Dickinson & Workman, 1979) was 9.71; post-test was 3.95. Standard deviation on the pre-test of The Relative School Activity Scale (Dickinson & Workman, 1979) was 10.46; post-test was 5.38. Standard deviation on The Children's Self-Concept Scale was 5.67; post-test was 5.67 (see Appendixes L, M, N, O, P, Q, R, and S).

A second problem in assessing a special population is the increased possibility of contradictory responses on the test. Contradictory responses occur when a subject affirms two contradictory statements. For example, if a subject gives an affirmation to "I am ugly," as well as an affirmation to "I am good looking," the subject is stating two contradictory responses. The presentation of a conflicting response indicates variable internal consistency in an individual's self-concept which suggests conflict between the real and the ideal self-concept (Jersild, 1963; Rosenberg, 1965). Conflict between the real and the ideal self-concept is present in some handicapped individuals (Fitts, 1972) as well as in adolescents in general (Jersild, 1963). The 13 experimental students were a multiply handicapped group ranging between 11 and 15 years of age.

Another possible explanation for the lack of significance of the four hypotheses is that the treatment of preparation for mainstreaming and mainstreaming with the infusion technique was not effective in increasing self-concept as measured by The School Activity Scale (Dickinson & Workman, 1979), The Children's Self-Concept Scale (Piers & Harris, 1964), The Relative School Activity Scale (Dickinson & Workman, 1979) and the teacher attitude scale.

Major efforts of the preparation programs were to improve experimental student behavior and academic performance and to increase mainstream awareness. The major effort of the infusion mainstreaming technique was to lessen the stress and anxiety of the mainstreaming process. However, it is feasible, considering the findings of the study, that the theory and the procedures used in the mainstreaming experiment were not effective in changing student self-concept.

Also, the lack of significance of the four hypotheses may have been influenced by the self-concept factors actually measured by these instruments. These self-concept tests may have measured a limited number of factors comprising self-concept. The factors of self-concept which were observed were academic performance, academic performance in relation to peers, and likes and dislikes about self as to behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction. The possibility does exist that factors of self-concept other than these were influenced by the treatment, but were undetected because they were not measured.

Problems specific to each assessment device may have effected the inconsistent and variable performance scores influencing the non-significant results. The students gave a number of conflicting responses on The School Activity Scale (Dickinson & Workman, 1979). Conflicting responses occur when a subject makes two conflicting affirmations to the same statement. For example, the subject is to place a circle around a statement to denote a strong affirmation

(These are things I do awful). The subject is to also place a square around a statement to denote a lesser affirmation (These are things I do poorly). The subject placing both a circle and a square around the same statement is make a conflicting response. The total possible number of responses on The School Activity Scale (Dickinson & Workman, 1979) for the 10 experimental students from whom data was collected was 180. (Calculations computing the number of conflicting responses included the assessment devices collected from all subjects. However, assessment devices scored three standard deviations below the mean were excluded in t test calculations. Hence, the diversity in the number of subjects exists. There were 10 subjects used for conflicting response calculations; there were 7 subjects used for t test calculations. The same holds true for The Relative School Activity Scale calculations.) The total number of conflicting responses by these 10 students out of a possible 180 was 51. The experimental students were possibly confused by the directions on the scale causing the 51 conflicting responses. Another possible cause for the lack of significance could have been the lack of clarity of the directions.

The students also gave a number of conflicting responses on The Relative School Activity Scale (Dickinson & Workman, 1979). The possible number of responses on The Relative School Activity Scale (Dickinson & Workman, 1979) for the 10 experimental students comprising data was 180. The total number of conflicting responses by these 10 students out of a possible 180 was 64. Confusion over the

directions is one possible cause of the 64 conflicting responses made by the experimental students. A second possible cause is that performance expectations were not clearly stated in the directions.

A possible limitation of The Children's Self-Concept Scale (Piers & Harris, 1964) was the split item approach utilized in this study. The effectiveness of the questionnaire may have been decreased. The Children's Self-Concept Scale (Piers & Harris, 1964) is normally composed of 80 items. These 80 items evaluate personality factors of happiness and satisfaction, popularity, behavior, intellectual and school status, physical appearance and attributes, and anxiety.

With the split item approach utilized in this study, the assessment device was structured into two 40 item questionnaires. This was done by equally randomly dividing the questions under each personality factor clustering. Each selection of 40 questions was structured into a scale. One scale was utilized for the pre-test and one scale was utilized for the post-test. This split item approach was utilized by the researcher due to the characteristics of the special population being assessed.

These experimental students all had been diagnosed as being emotionally disturbed and/or behaviorally disordered. All of these students could generally be characterized by deviant and disturbed

behavior. A student displaying deviant or disturbed behavior may be emotionally reactive, being resistant, unmanageable, abusive, or antagonistic. Or the student, being withdrawn, isolated, reclusive, on the fringes of the group, may be emotionally unresponsive (Cruickshank, 1971).

The experimental students, indeed, displayed the characteristics of a special population. Concern for the students' performance on an 80 item questionnaire influenced the split item approach providing the pre- and post-40-item questionnaires. However, the change of the assessment device structure to the split item approach may have affected the consistency of student performance.

The Teacher Attitude Scale is an unvalidated assessment device, designed by the researcher. The model of design utilized was a semantic differential scale. The scale is limited in descriptive choices, having only three response selections of good, fair, and poor. The scale may not have accurately defined the teacher's attitude regarding the self-concept of the experimental students.

Problems also exist in the utilization of self-report measures in self-concept research. Piers (1964) identified limitations centering around the respondent's personal bias and interpretation. The ambiguity of personal interpretation of the questions and directions on a self-report instrument leads to variable responses. The personal bias of the respondent's attempt to be socially desirable may influence responses. The personal acquiescence of giving consistent

and therefore not selective responses may influence assessment outcome. Pier's final limitation of respondent performance on self-report measures is the giving of forced answers, answers that do not really describe the respondent, but which are the only possibilities available. These generalized limitations of self-report, self-concept measures possibly influenced the inconsistent and variable performance on the scales and, hence, on the statistical results.

The overall findings in this study do not show a significant change in student self-concept following mainstreaming. No significant change in student self-concept was observable following the preparation and movement of the entire experimental class (including teacher and teacher's aide) into the mainstream.

The influence of mainstreaming on self-concept when using programs to train for mainstreaming was not observable. The training programs for mainstreaming implemented with the experimental students and with others at the regular education school receiving them showed no significant influence as to change in student self-concept.

The effect of the infusion mainstreaming technique on self-concept was not observable. The technique, designed to ease the transition of the mainstreamed student from the special education placement to the regular education placement, seemingly did not influence change in student self-concept.

The use of a combination of student preparation, mainstream school preparation, and a special mainstreaming technique were not

influential in changing student self-concept as assessed in this study. These results coincide with the findings of Van Putte (1979) and Carvajal (1972), whose studies support the mainstreaming perspective that there is no significant relationship between school placement and self-concept.

This study concludes that there is no significant change in self-concept resulting from the mainstreaming experience of these 13 experimental students. Nevertheless, this conclusion should be interpreted equivocally. There was no significant increase in student self-concept. Neither was there a significant decrease in student self-concept.

Recommendations for Further Research

An area worthy of investigation in relation to this study is the transfer of learning theory. The theory was a strong component in the procedure of training for mainstreaming and the infusion technique.

The transfer of learning is defined as a facilitation of learner performance which occurs following training on a similar task (Cruickshank & Blake, 1957). Different conditions are conducive to obtaining the maximum amount of learning transfer possible. Primary among these conditions is a high degree of similarity between the elements of the training and the elements of the transfer task (Bower & Hilgard, 1981; Cruickshank & Blake, 1957; Ellis, 1965; LeFrancois, 1982).

The training for mainstreaming provided the experimental students with training on tasks very similar to tasks at the mainstream (regular) school. Behavioral performance, peer interaction, and mainstream awareness experiences were tasks of mainstream training at the special school. These same tasks were performance tasks at the mainstream school.

The infusion mainstreaming technique focused on providing the experimental students with a high degree of similarity between the elements of the training and the transfer task. Infusion provided the same support system, classmates, activities, environment, and materials to the experimental students throughout the training at the special school and the mainstream experience at the mainstream school. These elements of training remained as elements of the transfer task.

A study observing the change in student self-concept following training for mainstreaming and mainstreaming with the infusion technique could emphasize, as well, the transfer of learning theory. The theory was strong and prominent throughout the approach utilized in this study.

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APPENDIXES

APPENDIX A

THE SCHOOL ACTIVITY SCALE

Instructions: Listed below are a number of things you do in school. We would like to find out how well you do in each of these activities. We want to know what things you are "super good" at, what activities you are "pretty good" in doing, and what activities you are "awful and "poor" in. There are no right and wrong answers. We are only attempting to learn what you think you are good and poor at in school.

1. Put two lines under the things that you do super well. Put one line under the things that you do pretty well. Just mark those activities you do "super well" or "pretty well". Do not mark those things in which you are just average or do not do in school.

Solving math problems in class	Reading the language book at school
Spelling	Writing school assignments
Drawing in art class	Reading the science book at school
Playing games during gym or recess	Singing in music class
Reading the Social Studies book	

2. Put a circle around those things that you do awful. Put a square around the things that you do poorly. Just mark those activities you do "awful" or "poorly". Do not mark those things in which you are just average or do not do in school.

Solving math problems in class	Reading the language book at school
Spelling	Writing school assignments
Drawing in art class	Reading the science book at school
Playing games during gym or recess	Singing in music class
Reading the Social Studies book	

SCORING: Super well rating = 5 points
Pretty well rating = 4 points
Average rating = 3 points
Poorly rating = 2 points
Awful rating = 1 point.

APPENDIX B

THE RELATIVE SCHOOL ACTIVITY SCALE

Instructions: Listed below are a number of things you do in school. We would like to find out how well you do in each of these activities compared to other children in your class. We want to know what things you are "super good" in doing, and what activities you are "awful" and "poor" in. There are no right and wrong answers. We are only attempting to learn what you think you can do better or worse than others children in your classroom.

1. Put two lines under the things that you do super well compared to other children in your class. Put one line under the things that you do pretty well. Just mark those activities you do "super well" or "pretty well". Do not mark those things in which you are just average or do not do in school.

Solving math problems in class	Reading the language book at school
Spelling	Writing school assignments
Drawing in art class	Reading the science book at school
Playing games during gym or recess	Singing in music class
Reading the Social Studies book	

2. Put a circle around those things that you do awful. Put a square around the things that you do poorly. Just mark those activities you do "awful" or "poorly". Do not mark those things in which you are just average or do not do in school.

Solving math problems in class	Reading the language book at school
Spelling	Writing school assignments
Drawing in art class	Reading the science book at school
Plahing games during gym or recess	Singing in music class
Reading the Social Studies book	

SCORING: Super well rating = 5 points
Pretty well rating = 4 points
Average rating = 3 points
Poorly rating = 2 points
Awful rating = 1 point.

APPENDIX C

THE CHILDREN'S SELF-CONCEPT SCALE

(THE WAY I FEEL ABOUT MYSELF)

PRETEST

Here is a set of statements. Some of them are true of you and so you will circle the yes. Some are not true of you and so you will circle the no. Answer every question even if some are hard to decide, but do not circle both yes and no. Remember, circle the yes if the statement is generally like you, or circle the no if the statement is generally not like you. There are no wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

1. My parents expect too much of me. yes no
2. My classmates make fun of me yes no
3. I get into a lot of fights. yes no
4. I can give a good report in front of the class. yes no
5. I wish I were different. yes no
6. My classmates in school think I have good ideas yes no
7. I behave badly at home yes no
8. I am slow in finishing my schoolwork yes no
9. My looks bother me yes no
10. I am cheerful yes no
11. I am among the last to be chosen for games. yes no
12. I pick on my brother(s) and sister(s) yes no
13. I am often sad yes no
14. I am unpopular yes no
15. My friends like my ideas. yes no
16. I can be trusted. yes no
17. I am an important member of my class. yes no
18. I have good ideas yes no
19. I like being the way I am yes no
20. It is hard for me to make friends yes no
21. It is usually my fault when something goes wrong. yes no

22. I am often mean to other people yes no
23. I am popular with boys. yes no
24. I am an important member of my family yes no
25. In school I am a dreamer. yes no
26. I often get into trouble. yes no
27. I am well behaved in school yes no
28. I often volunteer in school yes no
29. I have a good figure. yes no
30. I have lots of pep. yes no
31. I cry easily. yes no
32. I give up easily. yes no
33. I feel left out of things yes no
34. I have a pleasant face. yes no
35. I have nice hair. yes no
36. I am often afraid yes no
37. I get worried when we have tests in school. yes no
38. I am dumb about most things yes no
39. My family is disappointed in me yes no
40. I forget what I learn yes no

APPENDIX D

THE CHILDREN'S SELF-CONCEPT SCALE

(THE WAY I FEEL ABOUT MYSELF)

POSTTEST

Here are a set of statements. Some of them are true of you and so you will circle the yes. Some are not true of you and so you will circle the no. Answer every question even if some are hard to decide, but do not circle both yes and no. Remember, circle the yes if the statement is generally like you, or circle the no if the statement is generally not like you. There are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

1. I am a happy person yes no
2. People pick on me yes no
3. I am clumsy yes no
4. I get nervous when the teacher calls on me. yes no
5. I am different from other people. yes no
6. I am a good person. yes no
7. I think bad thoughts. yes no
8. I am lucky yes no
9. I feel left out of things yes no
10. My family is disappointed in me yes no
11. I am good in my schoolwork. yes no
12. I am a good reader. yes no
13. I am unhappy. yes no
14. I am popular with girls yes no
15. I am obedient at home yes no
16. I am well behaved in school yes no
17. When I grow up I will be an important person. yes no
18. I am smart. yes no
19. I am unpopular. yes no
20. I do many bad things. yes no

21. I cause trouble to my family yes no
22. My classmates in school think I have good ideas. yes no
23. My friends like my ideas yes no
24. I have many friends. yes no
25. I am easy to get along with. yes no
26. I am an important member of my class yes no
27. I am a leader in games and sports. yes no
28. I am nervous. yes no
29. I have pretty eyes. yes no
30. I get nervous when the teacher calls on me yes no
31. I am good looking yes no
32. I worry a lot. yes no
33. I have nice hair yes no
34. I am shy yes no
35. I have lots of pep yes no
36. I am strong. yes no
37. My looks bother me yes no
38. I am among the last to be chosen for games yes no
39. I sleep well at night yes no
40. I am popular with boys yes no

APPENDIX E

THE TEACHER ATTITUDE SCALE

Please list the child's name to the left. Rank your interpretation of the child's current self concept by placing your mark accordingly.

Example:

<u>J. Jones</u> 	good _____ : _____ : <u>X</u> poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor good _____ : _____ : _____ poor
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SCORING: Good rating = 3 points
Fair rating = 2 points
Poor rating = 1 point.

APPENDIX F

TEACHER'S BEHAVIOR CHECKLIST AND CONSEQUENCES

<u>Inappropriate Behavior Charted</u>	<u>Consequence</u>
1. Not getting work done (Work time allocated daily)	1. Complete during free time ^a
2. Out of seat (during work time or discussion)	2-3. Loss of five minutes of free time ^b
3. Talking out of turn (not raising hand)	
4. Hall behavior (running, yelling)	4-6. Loss of fifteen minutes of free time
5. Cafeteria behavior (running, throwing food)	
6. Bathroom behavior (writing on wall, arguing)	
7. Not responding to first request ignoring, refusing, arguing)	7. Loss of a free time period
8. Fighting	8-12. Loss of all day privileges (did nothing with the group, ate alone, worked in isolation, no free time)
9. Backtalking (inappropriate comment, cussing, yelling at teacher, peers)	
10. Teasing (making fun, name calling)	
11. Threatening (verbally or physically)	
12. Destruction of school property (writing on desks or walls, throwing chairs or desks)	

^a There were two 20-minute free times daily. One before lunch and one at the end of the day.

^b Time being made up during free time was spent in time-out or by overcorrection of the behavior during free time.

(Girdler et al., 1982, p. 18)

APPENDIX G

EXPERIMENTAL STUDENT BEHAVIORAL CHANGE

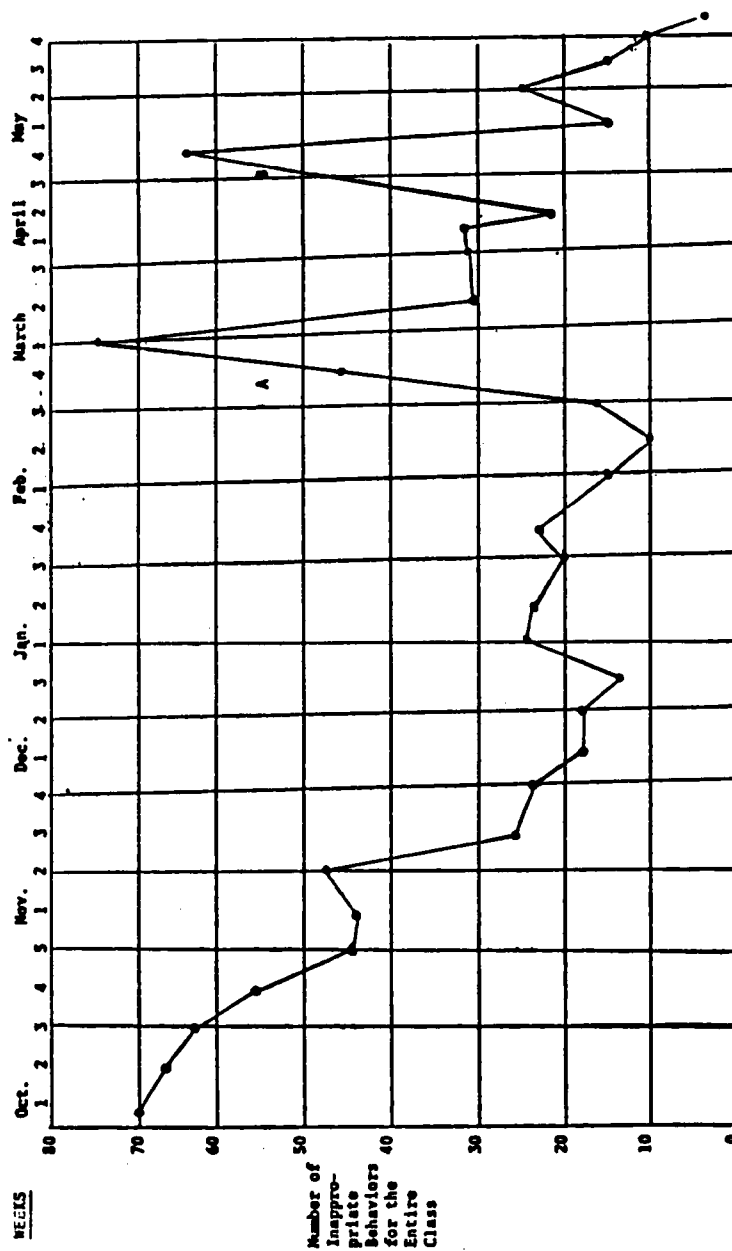
Student	<u>TIME PERIOD</u>	
	<u>October-January</u>	<u>February-May</u>
A	17	7
B	60	63
C	27	6
D	9	5
E	28	9
F	125	88
G	1	0
H	134	120
I	62	28
J	40	27
K	34	8
L	54	24

Total Number of Inappropriate Behaviors for Each Child Over Two
Four-Month Periods

(Girdler, et al., 1982, p. 18)

APPENDIX H

GRAPH OF EXPERIMENTAL STUDENT BEHAVIORAL CHANGE



Peak A can be attributed to the behavior of student H who underwent five foster home placement changes within the school year. Compare to Table 2. Peak B represents the week the class moved to regular school.

(Girdler et al., 1982, p. 19)

APPENDIX I

MAINSTREAM AWARENESS DISCUSSION TOPICS

1. Handicapping conditions.
2. The purpose of the special school.
3. The goals for the experimental students.
4. Improving behavior and academic achievement to enable the students' return to a mainstream (regular) school.
5. Expectations of the mainstream (regular) school environment.
6. Problems that might occur such as getting less teacher attention in a larger class, being called names by other students, experiencing frustration with academic work.
7. Alternatives to dealing with problems that might occur.
8. Opportunities available in a mainstream (regular) school such as sports programs, a variety of friends.
9. The first day of school upon returning to the mainstream (regular) school.

DAILY BEHAVIOR CHECKLIST

RETURN TO

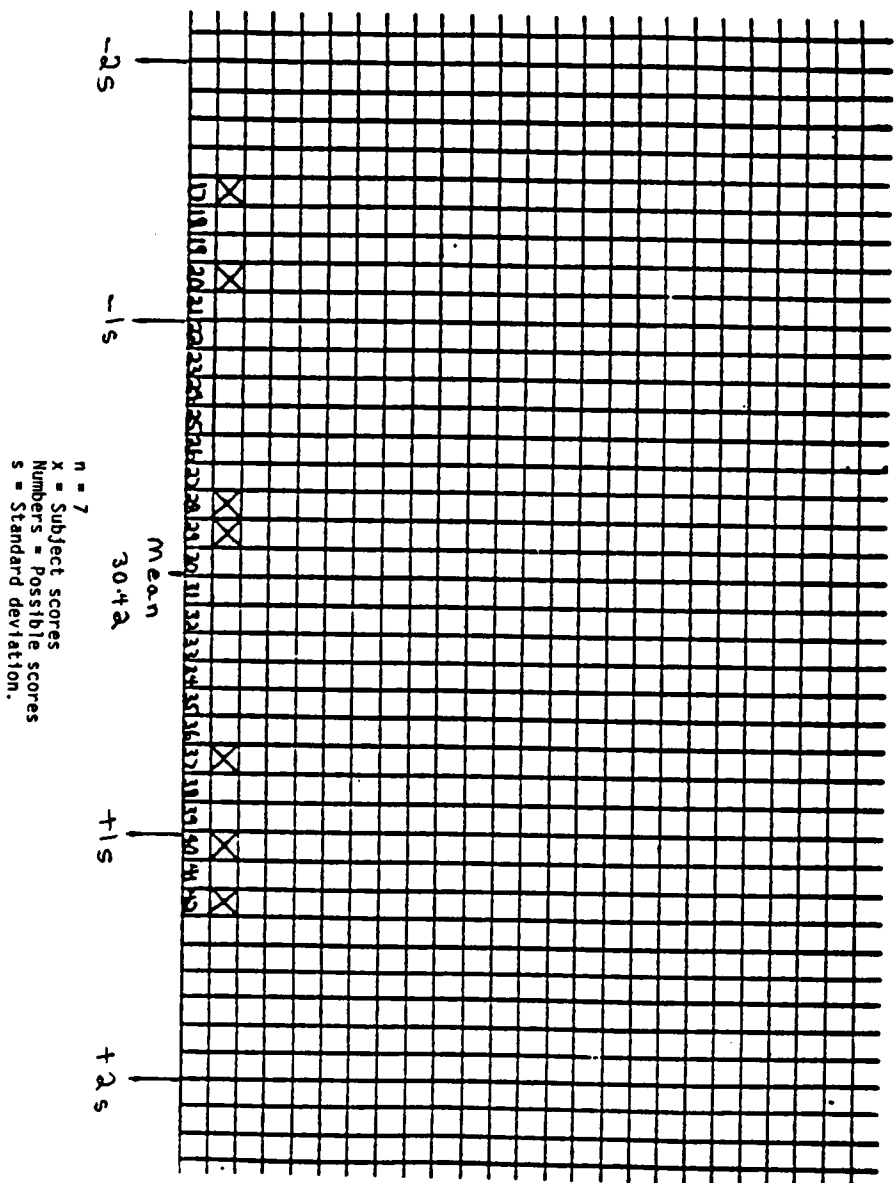
APPENDIX K

TASKS OF THE MAINSTREAM COORDINATOR AT THE MAINSTREAM (REGULAR) SCHOOL

1. Provided observation and consultation on problem students, formally and informally.
2. Established and presented weekly in-service training in emotional disturbance, behavior management, and program development and implementation.
3. Assisted administrators in assessing teacher attitude toward emotional disturbance (before and after the in-service sessions and the observation and consultation services for problem students).
4. Assisted administrators in mechanisms for developing positive attitudes toward mainstreaming (teacher trading, education in emotional disturbance).
5. Was a liaison between the special school and the mainstream (regular) school concerning the transition of the experimental class from the special school to the mainstream (regular) school.

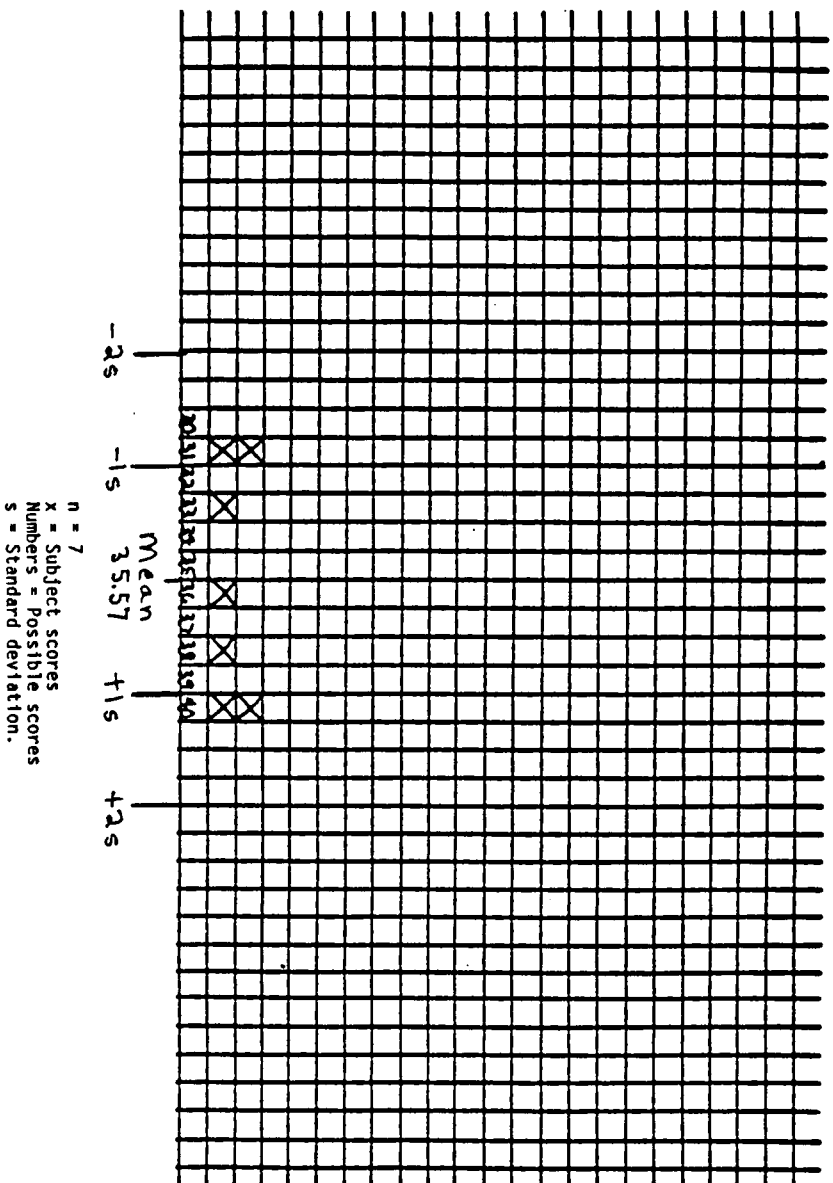
APPENDIX L

EXPERIMENTAL STUDENT PERFORMANCE SCORES ON THE PRETEST OF THE SCHOOL ACTIVITY SCALE



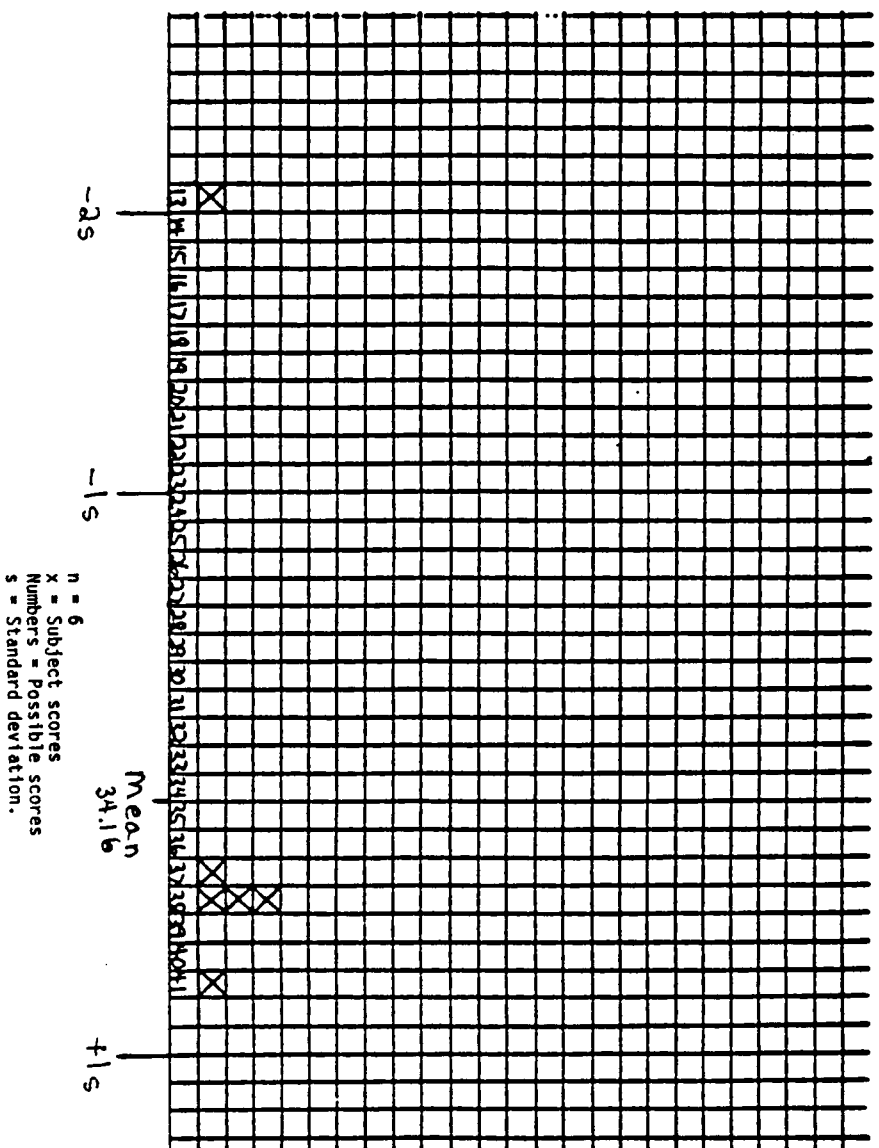
APPENDIX M

EXPERIMENTAL STUDENT PERFORMANCE SCORES ON THE POSTTEST OF THE SCHOOL ACTIVITY SCALE



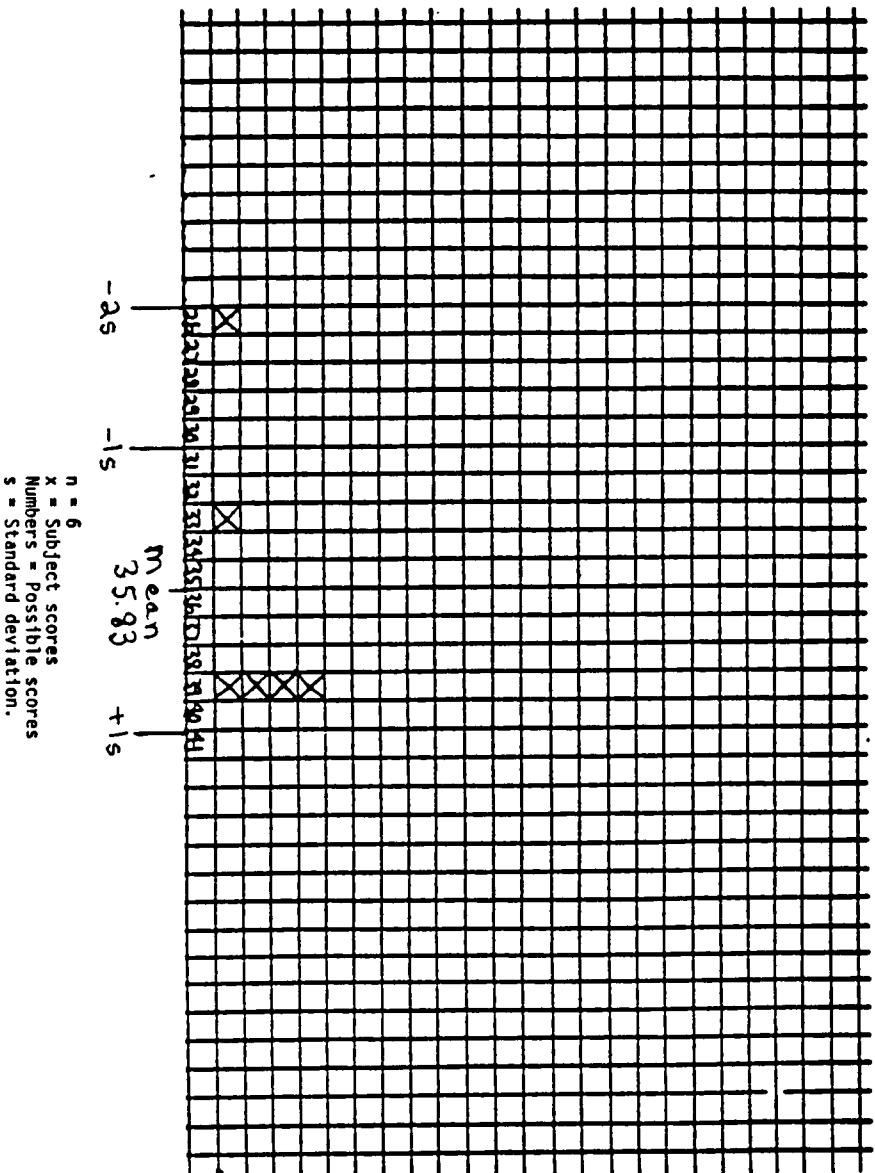
APPENDIX N

EXPERIMENTAL STUDENT PERFORMANCE SCORES ON THE PRETEST OF THE RELATIVE SCHOOL ACTIVITY SCALE



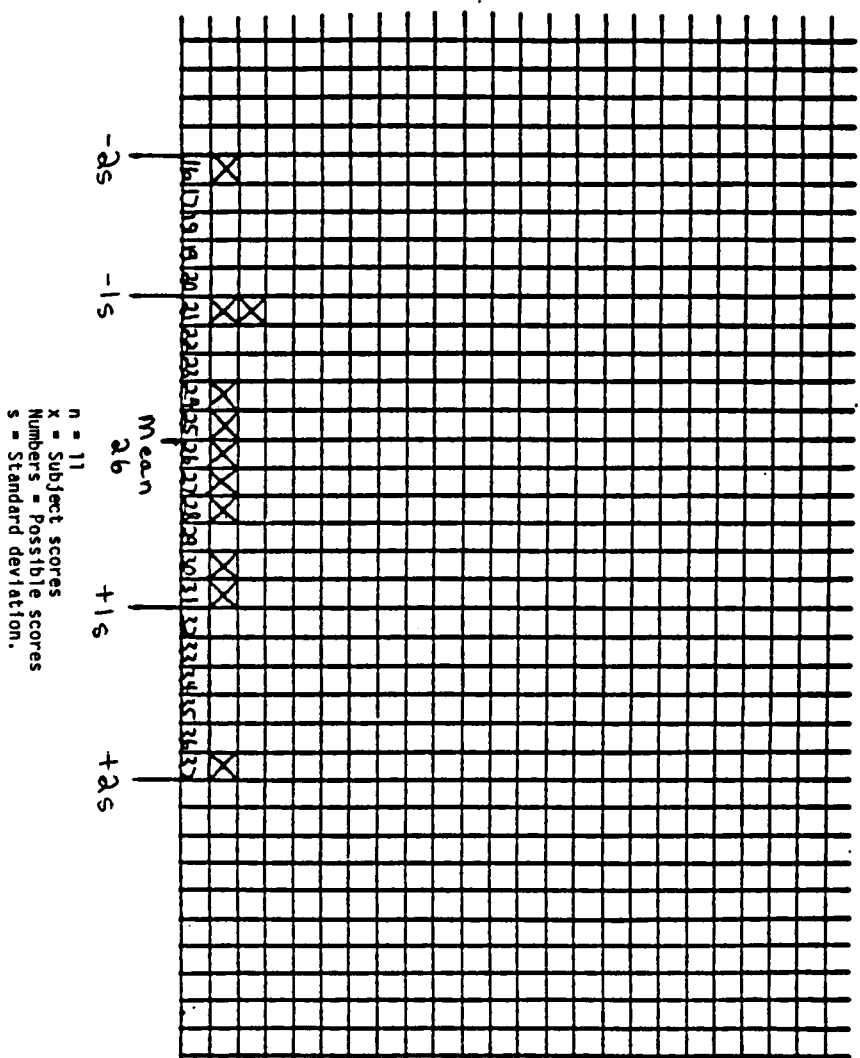
APPENDIX 0

EXPERIMENTAL STUDENT PERFORMANCE SCORES ON THE POSTTEST OF THE RELATIVE SCHOOL ACTIVITY SCALE



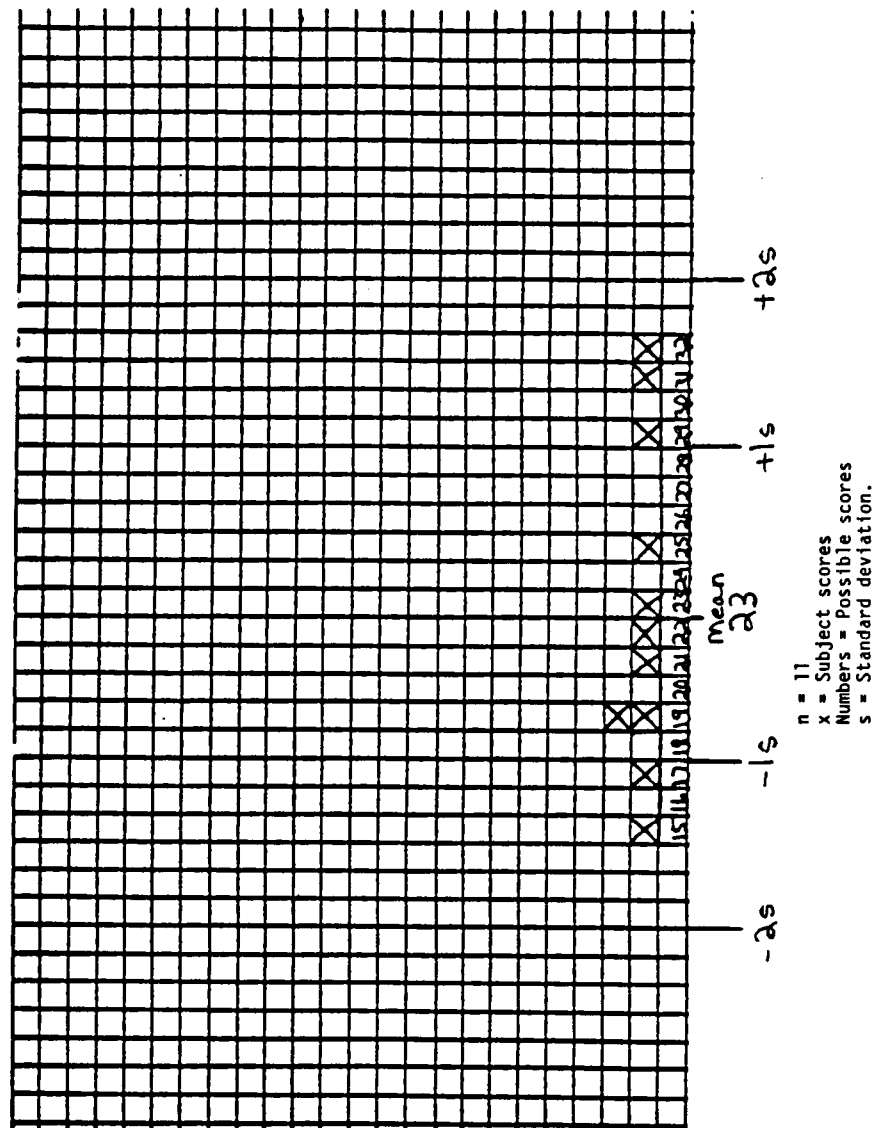
APPENDIX P

EXPERIMENTAL STUDENT PERFORMANCE SCORES ON THE PRETEST OF THE CHILDREN'S SELF-CONCEPT SCALE



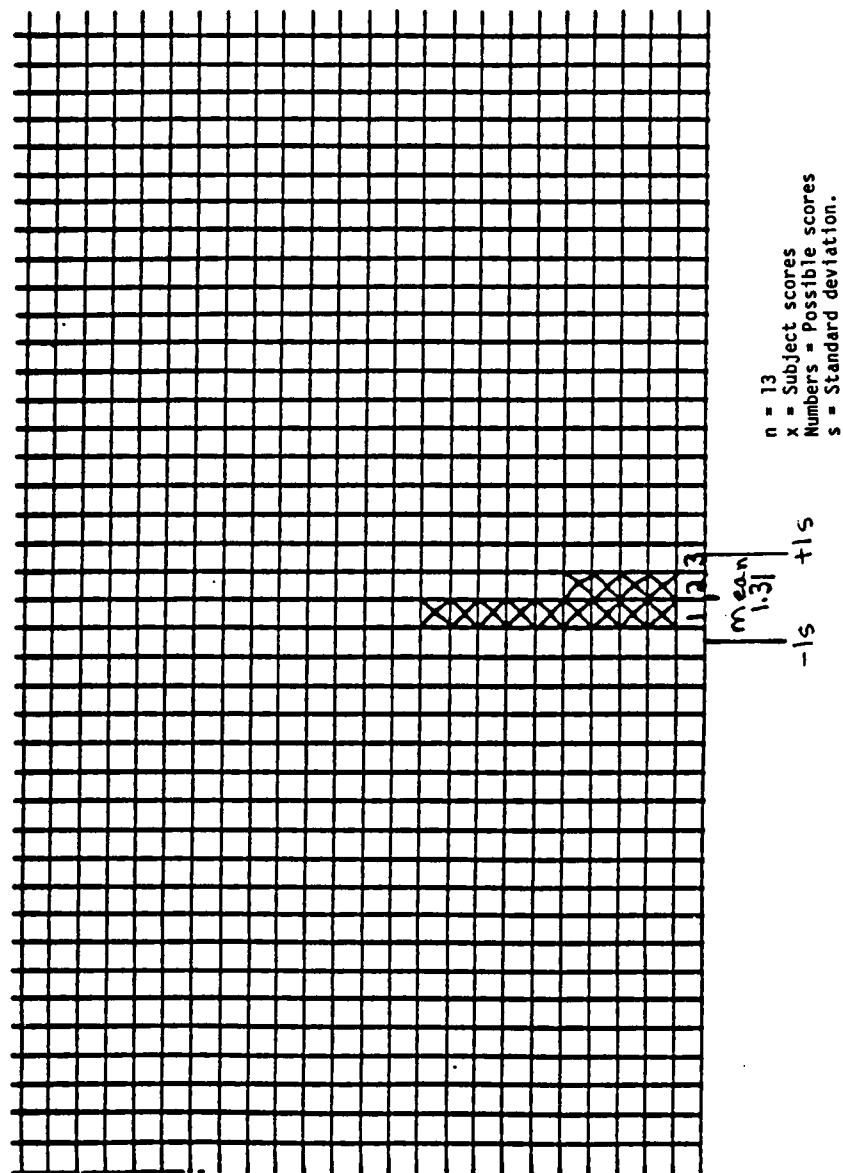
APPENDIX Q

EXPERIMENTAL STUDENT PERFORMANCE SCORES ON THE POSTTEST OF THE CHILDREN'S SELF-CONCEPT SCALE



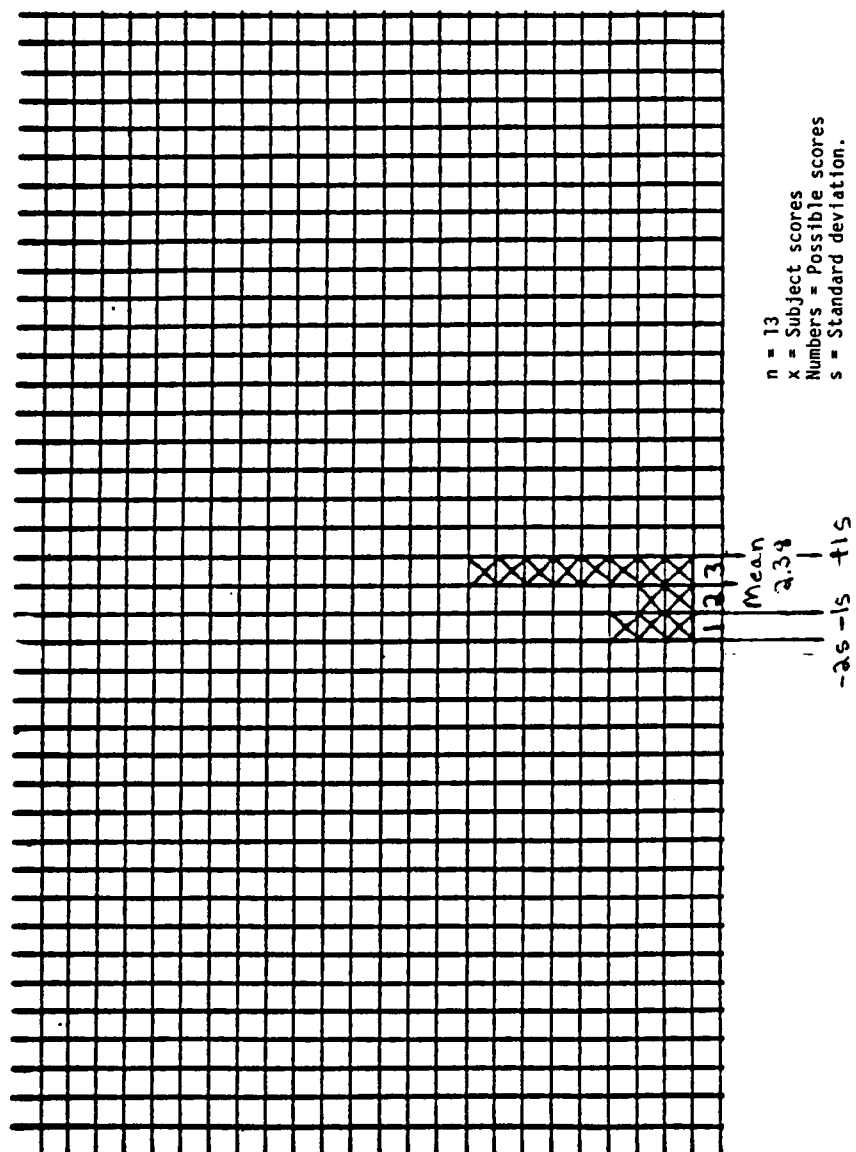
APPENDIX R

EXPERIMENTAL STUDENT PERFORMANCE SCORES ON THE
PRETEST OF THE TEACHER ATTITUDE SCALE



APPENDIX S

EXPERIMENTAL STUDENT PERFORMANCE SCORES ON THE
POSTTEST OF THE TEACHER ATTITUDE SCALE



APPENDIX T

LETTER OF PERMISSION TO DUPLICATE CHARTS

Daniel Arthur Rehabilitation Center

Phone (615) 482-4081

728 Emory Valley Road

Oak Ridge, Tennessee 37830

Z. M. Brody
Director

W. P. Hardy, M. D.
Medical Director

August 23, 1983

Sheila Baker
Route 11
Brock Road
Knoxville, Tennessee 37918

Dear Sheila,

It is good to hear from you! I thought maybe you had died, or left the country or something.

Congratulations on getting to the final phase of your thesis.

I have talked with Teresa regarding your request to reproduce our charts. You are welcome to do so, and we hope it will be a meaningful part of your paper. We have not pursued publication, and have no plans to do so at the present time.

Please send or bring us a copy of your thesis. Good Luck!

Sincerely,


Jim Griffin

JG/el



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VITA

Sheila Leigh Baker was born in Kingsport, Tennessee, on August 29, 1950. Ms. Baker graduated from Milligan College, Milligan, Tennessee, (1971) with a B. A. in secondary education and minors in psychology and sociology.

Ms. Baker worked as a graduate assistant at The University of Tennessee, Knoxville, while pursuing a Master of Science degree in special education. She graduated in December 1985.

Ms. Baker has taught learning disabled, mentally retarded, emotionally disturbed, autistic, and severely handicapped children and adults at an area developmental center, at a local psychiatric hospital, and in area public schools. Teaching experiences have also included private tutorial programs for handicapped students, regular education at preschool and adult levels in local public and private schools, and working as a teacher and consultant with the gifted program in area public schools. Ms. Baker has been involved in education for the majority of the past fourteen years.

Ms. Baker is married to Mark Francis Nixon. Mr. Nixon is currently completing a doctoral program at The University of Tennessee, Knoxville.