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# A Comparison of Learning Outcomes of Mentally Disabled Children Educated in Self-Contained Classrooms and Multicategorical Settings

Lana Huether

*University of Nebraska at Omaha*

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A COMPARISON OF LEARNING OUTCOMES OF MENTALLY  
DISABLED CHILDREN EDUCATED IN SELF-CONTAINED  
CLASSROOMS AND MULTICATEGORICAL SETTINGS

Presented to the

Graduate Faculty  
University of Nebraska  
at Omaha

In Partial Fulfillment  
of the Requirements for the Degree  
Specialists in Education

University of Nebraska at Omaha

by

Lana Huether

April, 1986

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FIELD PROJECT ACCEPTANCE

Accepted for the Graduate Faculty, University of Nebraska, in partial fulfillment of the requirements for the degree Specialist in Education, University of Nebraska at Omaha.

Supervisory Committee

Name	Department
<u>Kathy Kasten</u>	<u>Ed Ad</u>
<u>Wilson Michael</u>	<u>Counseling &amp; Special Ed.</u>
<u>Dorella Kellam</u> Chairman	
<u>4-11-86</u> Date	

## ACKNOWLEDGEMENT

The creation of this field project was no easy task, but I felt the questions I had to answer would improve education for the mentally disabled students in the Council Bluffs Community School District, so it made my efforts all worthwhile! This project is the result of a lot of devotion, dedication, and commitment to improving teaching but most of all it is a pledge to the firm belief in the right to an education for all handicapped people.

I would like to thank all the wonderful students I have had the opportunity to work with over the past ten years. They have taught me as much, if not more, as I have taught them. It was their determined struggle to learn that inspired me to continue to write when the going got rough! But most of all, I would like to dedicate the pages that follow to my parents for their unfaltering love and care for my brother, Dale. Together, the three of them have taught me to discover and bring out the potential in every handicapped student I meet, no matter how limited those skills may be!

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## Chapter 1

### Introduction to the Study

#### Introduction

Following the implementation of Public Law 94-142, "The Education for All Handicapped Children Act of 1975," categorizing special needs children was a useful way of grouping students who needed similar treatment. Categories for each disability were viewed as performing an important function. Categorizing focused volunteer efforts, assisted in the passage of legislation, and aided research efforts (Gallagher, Forsythe, Ringelheim, and Weintraub, 1975). The social isolation of the mildly mentally disabled child in the regular classroom setting had led to the claim that a better education would result if the students were placed in small, homogeneous groups with a specially trained teacher using appropriate materials and techniques. Such special education classes became available in all states receiving federal funding, beginning with programs for the mildly mentally disabled and expanding into segregated classrooms for the learning disabled and behaviorally disordered child.

Almost as soon as they had become popularly established, classes for the special education of the mildly disabled student came under question. Many negative effects on the disabled student were acknowledged as a direct result of being labeled and placed in these classrooms (Hobbs, 1975). Also questionable were whether or not the detrimental effects of being educated in the segregated special education classroom outweighed the alternative of remaining in the regular classroom and experiencing academic and social failure. While these questions were being hotly

debated in educational circles, the fact that special education classes cost more money to operate came to be an even more important concern in times of educational cutbacks and financially hard times.

School districts and state departments of public instruction began to allow the merging of categories to include many kinds of disabled children under the same heading. By combining mentally disabled, learning disabled, and behaviorally disordered students into one special education setting and labeling it "nongategorical" or simply "children with special needs" some of the adverse effects of labeling them could be avoided. The high cost of providing three separate programs in each school for such a low incidence of mildly disabled students could be alleviated by combining them into one classroom. However, some serious problems began to occur with this type of multicategorical arrangement. Frequently, teachers were not adequately trained to deal with all the disability areas that may be encountered in the multicategorical setting and students themselves may be adversely affected by the other students' inappropriate behaviors in the classroom. More importantly, if the function of the educational process is to prepare students with adequate academic, social, and vocational skills to deal with the world, it needs to be determined if disabled children in multicategorical settings are performing this task satisfactorily. This is the problem to be addressed in this paper.

#### Statement of the Problem

The research on the effectiveness of multicategorical settings is inconclusive. It needs to be determined which educational setting ensures the greatest learning achievement during the academic year. This

problem is a relatively new one since mildly mentally disabled, learning disabled, and behaviorally disordered children were formerly educated in specific disability classrooms where their peers had similar disabilities and have only recently been combined into multicategorical settings for instructional purposes.

The purposes of this study were twofold. The first purpose of the study was to determine if there was a different pattern of reading and mathematics achievement of ten and eleven-year-old mildly mentally disabled students educated in a mental disabilities room and mildly mentally disabled students educated in a mental disabilities room for at least two academic years and then transferred to a multicategorical special education program.

The second purpose of this study was to determine if the parents of the mildly mentally disabled students perceived a change in their child's social or emotional behavior when their child was transferred from the mental disabilities classroom to the multicategorical setting.

#### Delimitations

The research was delimited to ten mildly mentally disabled students who were chronologically aged ten and eleven years. Five of the students were being educated in a mental disabilities classroom in the Council Bluffs Community School District in Council Bluffs, Iowa. The other five mildly mentally disabled students selected for the longitudinal achievement score study and parent interview analysis were students who were educated in a mental disabilities program and then transferred to a multicategorical setting.

### Limitations

The researcher was unable to control the differences among the individual teachers participating in the study. Individual teachers varied slightly as to the number of years of actual teaching experience, degree of college preparation and training in educating mentally disabled students, and enthusiasm and professionalism toward the teaching experience. However, all the teachers in the study possessed graduate hours beyond the bachelor's degree in special education and held current teaching certificates in the state of Iowa.

Another variable impossible to control, was the manner in which individual building principals perceived the special education programs where the mentally disabled students were being educated and the amount of support they offered the programs in their buildings. Although the programs were mandated under Public Law 94-142 and had been operational in their respective buildings since 1977, individual building principals had considerable autonomy in controlling the dispersion of funds, materials, and supplies, and the assigning of additional teacher aides and paraprofessional staff.

### Assumptions

At the beginning of this investigation, the following basic assumptions were made:

1. The mean intelligence quotient, the social and economic conditions of the families, and the amount of time spent on academic presentations for the mildly mentally disabled students were relatively equal between the two groups of students; approximately five and one half hours per day.

2. Although all the teachers participating in this study were qualified to teach the students enrolled in their classrooms, their degree of training varied. Under Iowa Teacher Certification requirements, teachers in multicategorical programs are required to hold an Iowa professional teacher's certificate with endorsements in elementary and/or secondary education. Additionally, teachers must have full approval in at least two areas (mentally handicapped 81, emotionally maladjusted 80, or learning disabled 97) of which at least one approval must have been completed at the graduate level through completion of a program of at least twenty graduate hours. (In using the Iowa Teacher Certification requirements, the term "mentally handicapped" refers to the same group of students who were referred to as mentally disabled in this study. Likewise the term "emotionally maladjusted" refers to students who are frequently referred to as behaviorally disordered in Iowa educational programs.)

3. As the Iowa Department of Public Instruction refers to mentally retarded students as "mentally disabled" we can assume that these same types of children are enrolled in the special education programs that are referred to as "mental disability classrooms."

#### Questions Answered

The researcher attempted to answer the following two questions in this study.

1. Did mildly mentally disabled students' reading and mathematics achievement scores show a different pattern of gain scores when the students transferred from a mental disabilities classroom to a multicategorical setting as compared to mildly mentally disabled students

who remained in a mental disabilities classroom?

2. Did parents of mildly mentally disabled students perceive a change in their child's social or emotional behavior after their child was transferred to a multicategorical setting?

### Methodology Employed

The researcher tracked longitudinal academic performances on the single subject samples and graphically displayed the reading and mathematics gain scores as measured by the annual pre and post-test scores of the Woodcock Reading and KeyMath Tests. The sample population included five mildly mentally disabled students, aged ten and eleven years, who had been educated continuously in a mental disabilities program for a three-year period and five mildly mentally disabled students of the same chronological age who were educated in a mental disabilities setting and then transferred to a multicategorical setting. The students selected from the mental disabilities programs at Edison, Franklin and Walnut Grove Schools had similar characteristics as the students from the multicategorical programs at Rue, Tinley and DeForest Schools on the basis of chronological age, full scale intelligence quotients, socioeconomic status, and number of years of attendance in special education programs.

The researcher also personally interviewed the parents or primary caregivers of the five students who were transferred from the mental disabilities programs to the multicategorical settings to determine if the parents perceived a change in their child's social or emotional behavior after the transfer in special education programs was made. The results of these parent interviews were described in narrative form

within this paper.

### Definition of Terms

Behaviorally Disordered. For the purposes of this study the Iowa State Department of Public Instruction's definition was used which defines behaviorally disordered as the inclusive term for the patterns of situationally inappropriate behavior which deviates substantially from behavior appropriate to one's age and significantly interferes with the learning process, interpersonal relationships, or personal adjustment of the pupil to such an extent as to constitute a disorder.

Learning Disabled. The Iowa State Department of Public Instruction's definition was also used to define this term. Learning disabled denotes the inability to learn efficiently, in keeping with one's potential, when presented with the instructional approaches of the general curriculum. The inability to learn is manifested as a disability in an individual's reception, organization, or expression of information relevant to school function. There must be a severe discrepancy between an individual's general intellectual functioning and achievement in one or more areas: school readiness skills, basic reading skills, reading comprehension, mathematical calculation, mathematical reasoning, written expression and listening comprehension. A learning disability is not primarily the result of sensory or physical impairments, mental disabilities, behavioral disorders, cultural or language difference, environmental disadvantage, or a history of an inconsistent educational program.

Mental Disability. For the purpose of this study, the Iowa State Department of Public Instruction's definition of mental disability was



used. Mental disability is the inclusive term denoting significant deficits in adaptive behavior and subaverage general intellectual functioning. For educational purposes, adaptive behavior refers to the individual's effectiveness in meeting the demands of one's environment and subaverage general intellectual functioning as evidenced by performance greater than one standard deviation below the mean on a reliable individual test of general intelligence valid for the individual pupil.

Multicategorical. Multicategorical means special education in which the pupils receiving special education have different types of disabilities but are educated in the same program.

Special Education. In this study the term special education referred to all instructional and support programs and services provided by the Iowa State Department of Public Instruction, the Area Educational Agency, the school district, or other recognized agencies. Special education provides a continuum of program and service options in order to provide the least restrictive intervention which is required to meet the educational needs of the student, regardless of disability.

Self-contained Special Class. For the purposes of this study, the Iowa State Department of Public Instruction's definition of self-contained special class was used. It is an educational program for students with similar educational needs who require special education but who can benefit from limited participation in the general education curriculum. This program shall include provisions for ongoing consultation and demonstration with the pupils' teachers.

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## Chapter 2

### Review of Related Literature and Research

#### Rational for Labeling the Disabled

Does classifying and integrating mildly mentally disabled children into an elementary self-contained classroom help them or harm them? Some professionals believe that the mentally disabled label may have a detrimental effect on children that could persist throughout their lives (MacMillan, 1977). Fox, Luszki, and Schmuck (1966) found that not classifying and labeling the mildly mentally disabled, behaviorally disordered, and learning disabled student but placing them in a noncategorical setting may benefit students in unexpected ways.

The evidence for and against segregated classrooms for the mildly disabled population is both complex and inconclusive. Historically, special education children have been segregated into categories--deaf, blind, mentally disabled--on the assumption that they could not be taught together and what and how they were taught would have to differ. Cromwell, Blashfield and Straus (1975) have questioned the need for this kind of division, and there is currently a new trend toward multicategorical special programs that do not try to distinguish between people who are blind, learning disabled, or mentally disabled for instructional purposes. Even under the traditional separation of these categories, there is little difference in the teaching techniques found in programs for the mentally disabled and the learning disabled student. Some professionals have, therefore, argued that the distinction between such groups is not really valid for instructional purposes and that they should be reclassified under a single category of "children with special

needs" or "exceptional children." MacMillan (1977) refers to this approach as not being noncategorical in the truest sense, but more realistically as being "new categorical" in nature.

One of the principal arguments for segregating the mildly disabled population is that by categorizing them, diagnosis can be related to treatment. An accurate diagnosis, and subsequent classification, should lead to the most efficient treatment plan. As noted by Hobbs (1975) the treatment-oriented role of classification is most obvious in cases of physical disorders or disease. If a metabolic disorder such as phenylketonuria (PKU) can be diagnosed, a specific dietary treatment plan can begin. However, in cases of mild mental disabilities in which classification is based on inferences from psychological evidence, the effectiveness of the treatment, special education, is questionable. Labeling the child mentally disabled may even make some of his problems worse.

Placing disabled children into neatly packaged groups has served important purposes in the history of education of the disabled in the United States. Special interest groups have organized on behalf of a specific group of disabled youngsters. The California Association for Neurologically Handicapped Children and the National Association for Retarded Citizens frequently consist of members who are parents of children in that specific category. These volunteer groups work together to get improved services for their particular category. Such special interest groups have been extremely influential in getting legislation passed, providing educational settings in the public schools, and raising money.

Categorizing children has been traditionally tied to the passage of legislation to aid disabled people. Legislators have been trained to think in terms of categories. Legislation was pushed by special interest groups working on behalf of a specific group of disabled people. Gallagher, Forsythe, Ringelheim, and Weintraub (1975) illustrate the sharp increase in funding for the mentally disabled, from slightly over \$200 million in 1965 to over \$600 million in 1971, as contrasted to the failure of funds given to programs for general education to filter down to the disabled. Gallagher et al. (1975) fear that sudden changes in labeling practices would decrease resources for the disabled. They would prefer instead to retain labels as a means of ensuring that funds would go to those for whom they were intended.

Finally, segregating categories is important for research purposes. We need to know whether a specific teaching technique benefits one category of children and not another. If no attention is paid to categories, the differential effects will be masked in research results. Hobbs (1975) believes, for research purposes, segregating categories should be refined rather than broadened. Hobbs, therefore, argues for more specific segregation of categories and for more discriminating ways of describing children.

The rapid growth of special education within the last ten years has produced an increase in the number of programs for children who have been referred to as "mildly disabled." In many cases, these children lack obvious indications of any disability since they appear reasonably intact sensorily, perceptually, emotionally, and cognitively. Newcomer (1977) identifies the common problems mildly disabled children share in her

research and finds that they are usually not achieving in academic subjects, particularly reading, and they have a tendency to engage in disruptive behaviors. In many cases, it is their characteristic disinclination to respond to group instruction as most of their peers do which causes educators to use such terms as "slow," "immature," or "poorly motivated." Newcomer points out that the learning difficulties these children exhibit is directly related to the caliber of their educational experience. The competence of their teachers and their compatibility with their classmates act to shape children's attitudes toward themselves and toward the school in general.

Regular educators have generally looked to special education for convenient solutions to the problems of educating the nonachieving, nonconforming child. Special educators have generally responded by accepting the premise that such children are defective or deviant in some way. Newcomer (1977) shows that educators best demonstrate this by routinely conducting diagnostic workups to assign the child to a particular disability group (e.g., mentally disabled, behaviorally disordered, or learning disabled) and then including them in a self-contained special education class.

Assigning many different categories of mildly disabled children to the same self-contained classroom is a questionable practice. Since many special education students characteristically differ little from their peers, there is no reason to assume that they have internal deficits that prevent learning. Efforts to discover the etiology which underlies their learning deficits are largely superfluous. Most diagnostic instruments used to identify special education students are not closely related

enough to academic competencies to be used as designators of specific teaching activities. The attempts to base educational prescriptions on the results of many of these tests have generally done little more than confuse teachers and, unfortunately, widen the gap between special and regular educators (Newcomer, 1977).

### Effects of Labeling

Algozzine (1981) investigated the relationship between the diagnostic label assigned to a child and the type of behavior exhibited by that child. He found characteristics typically considered severe problems for behaviorally disordered children included destructiveness, fighting, and negativism. Severe problems for the learning disabled child included distractibility, impulsivity, and short attention span. Other indications of perceptual and behavioral problems were also present within the differentially labeled categories.

Algozzine (1981) described certain categories of disabled students and surveyed educators to find the characteristics a child in each type of disability was expected to display. Algozzine also found that disabled students were expected by educators to be consistent in their deviant behaviors. A learning disabled child would be expected to exhibit characteristics which are deviant relative to a normal child and to be consistent in the display of those deviant features. It is those characteristics that have comprised and defined the condition, and their consistency is necessary for reliable identification to take place. When inappropriate characteristics of a more deviant condition (e.g., behaviorally disordered patterns are displayed by a learning disabled child), the child is considered to be exhibiting abnormal behaviors

within his/her category.

A variety of behaviors and child characteristics exist which can affect interpersonal relationships. Traditionally, these characteristics have been thought to exist within the individual child and, therefore, were cause for concern or intervention. However, Algozzine (1981) has found that the responses of other individuals to the stimulus qualities are equally as important. The implications of Algozzine's research suggest that labeling special needs children may generate restrictive tolerances for acceptable behavior. Movement between different special education categories may be a function of the child's behaviors and other people's reactions to him. If a child exhibits characteristics of a learning disability, he/she will be identified as learning disabled. However, should that same child (once labeled) begin to be disruptive or aggressive, the child's characteristics no longer fit those expected of that category. It is likely that this imbalance may foster movement among the categories of special education. Therefore, differentially labeled categories can help to promote remediation of characteristics in that condition (Algozzine, 1981).

#### Social Relationships of Disabled Students

Fox, Luszki, and Schmuck (1966) measured social relations in elementary classrooms and concluded that pupils who feel more comfortable with their peers are likely to utilize their academic abilities more fully than those who do not. Fox et al. have found that most pupils who have at least several good friends among their classroom peers will enjoy better mental health and will learn more effectively than pupils who have few or no friends, or who are actively disliked.



A pattern of classroom friendships in which almost every member was "most liked" by some other member contributed to pupils having positive feelings toward themselves, pupils perceiving the school situation positively, and pupils making good use of their intellectual potentials (Fox, Luszki, and Schmuck, 1966). On the other hand, in a pattern of friendship where one subgroup of pupils within the classroom is most popular (learning disabled students), another subgroup is most unpopular (behaviorally disordered students), and the rest of the students have few if any friends (mentally disabled students), the consequences are less favorable. In such a situation many students tend to have negative feelings about themselves, perceive school unfavorably, and make poor use of their potentials (Fox et al.).

The way a pupil feels about his peers, his studies, and his teacher determines how much he will benefit from the classroom experience. Fox et al. (1966) concluded that a classroom learning atmosphere which provides emotional support, encouragement, and mutual respect is conducive to student high self-esteem and to the utilization of academic abilities.

Fox et al. (1966) stated that research shows pupils tend to respond favorably to the learning situation when the teacher presents his objectives clearly and concretely, when he makes frequent checks of their reactions to classroom activities, and when he takes their point of view into consideration. Pupils who cannot find expression for their interests in academic procedures often fail to become involved in the learning process and to utilize their academic potentials. This may be difficult, if not extremely demanding, for a teacher to achieve when

educating multi-disability populations within one classroom setting. One subgroup of students may require constant reminders to stay on task and concrete examples, while another population may find the repetition boring or demeaning.

Fox et al. (1966) also suggests several areas of concern teachers must address when considering the social relations and student make up of any classroom. Pupils make judgments about their peers early in a school year and often maintain these judgments if no attempts are made to change them. A special education teacher with a diverse category of special needs children within the same classroom needs to influence their feelings toward each other in a positive direction to improve the mental health of certain students. Fostering a positive learning atmosphere will also increase the effectiveness of the teaching procedures.

The teacher must strive to help the pupils to perceive as acceptable the expanded variety of individual differences contained within the special education environment (Fox et al. 1966). It is important to show that everyone in the class has some knowledge or skill to offer in different situations. The teacher must involve all class members in cooperative activities in which these resources and assets can be used, changed, or broadened.

The teacher can change the patterns of interpersonal relations through different kinds of grouping and work assignments for the lower functioning mentally disabled student. The neglected or rejected student can be assigned to more tasks involving planning and carrying out classroom activities, thereby changing the way the child is perceived by his peers. Or the teacher can select students whose behavior is more

acceptable and assign "peer helpers" to them. Arranging a high-status pupil to give support to a student who is experiencing difficulty can be productive for both participants (Fox et al. 1966).

Stowitschek & Powell (1981) agree with other researchers that many disabled children exhibit socially isolated behaviors or often respond to initiations by adults yet ignore social contacts from other children. Thus, the probability of social responses being initiated or responded to by young disabled children is less than that of their nondisabled peers. Social initiations of one child that are not responded to or reciprocated by another tend to reduce the likelihood of any further interactions. The implications cited by Stowitschek et al. (1981) reveal that continued isolation of disabled students will persist until teachers positively influence peer social interactions among the disabled through instructional programs and materials.

#### Problems in Educating Multiple Populations

Thorpe, Chiang, and Darch (1981) identified some characteristics and problems of educating multiple special education populations in one classroom situation. Because disabled children are often grossly deficient in basic factual information, it is not uncommon for special education teachers to overemphasize rote learning in the segregated setting. This is especially true in educating the mentally disabled population. However, when educating the learning disabled and behaviorally disordered, teachers must employ both foundational skills and their application to ensure mastery of skills.

Many special education classrooms employ highly individualized instructional programs. Students are not only instructed at their own

level and pace, but individualization often signifies an absence of group interaction. Through individual work folders, learning centers, or tutoring, the student performs in a one-to-one setting during most of the school day (Thorpe et al. 1981). As with many other specialized techniques, individual instruction is often desired at first. However, it seldom approximates the practice in a regular classroom where small group work is frequent and large groups are regularly congregated for instructional purposes. It may be nearly impossible for teachers to approximate regular classroom groups in some special education classrooms. When the age range, intelligence range, and severity of inappropriate behaviors is significantly extensive, it becomes nearly impossible for one teacher to conduct group activities (Thorpe et al. 1981)

One of the most significant successful components of educating different populations in one educational setting is peer tutoring (Thorpe et al. 1981). Peer tutors can assist by playing the big brother or big sister role. Since some less able students and younger children are going to require some assistance, it may be feasible to enlist a peer who can be both friend and helper. The peer tutor can be given the responsibility for helping the younger or less intellectually able student become familiar with the other children in the room and help them become acquainted with classroom rules and procedures. In addition, the peer tutor can give instruction to the student when the teacher is too busy to help.

Since the goal of some of the students may be to return to the regular classroom setting once their behavior is under control or they

have learned to compensate for their learning disabilities, it is wise to teach for generalization of skills. Whereas a highly structured curricular approach is desired during acquisition of skills, less structured procedures are preferred during mainstreaming the students for reentry into the regular classroom situation (Thorpe et al. 1981). Since the enactment of P. L. 94-142 demands mainstreaming when possible through its provision that disabled students be educated in the "least restrictive environment," educators must not look at the multicategorical setting as a permanent placement for many of the students being placed there.

Most of the current special education programs are organized to serve clusters of children with similar exceptionalities (Jordan, 1966). Vast land areas, scattered populations, and a low incidence of children having particular special needs become obstacles for the development of service programs requiring highly trained and scarce personnel and specialized facilities. Local school districts, large in geographic area but small in enrollment, are not an appropriate base for administering comprehensive special education programs. Continued district reorganization and consolidation will not substantially alter this lack of appropriateness. Many districts are, therefore, developing single special education programs to education more than one area of disabling condition in one classroom.

Adequate and appropriate special education programs administered in the most efficient way possible are high-cost programs, (Jordan, 1966). The conditions peculiar to each state are likely to be the greatest determiner of the kinds of programs which might be developed. It is

doubtful that there is any one best way or any single pattern of organization that would fit all states with equal appropriateness. Whatever pattern of arrangement is devised, the framework within which special education programs are provided should be an integral part of the state school system which provides education for all children (Jordan, 1966). The concept of one multicategorical program in the local school buildings might lessen the necessity to move children out of the home attendance area and into another building. Financing of special education programs should be considered in the context of financing the total school program (Jordan, 1966). Financial patterns will vary in relation to organization of services. Educational services, plus the excess costs incurred in providing auxiliary services, raise the cost of providing a special education program. Various patterns of financing special education have evolved, such as Iowa's formula where the state reimburses local school districts on a portion of excess costs to educate the disabled students.

The personnel problem in multicategorical settings is related to the lack of financial support, variability of assignments, geographic remoteness, and lack of adequate teacher preparation. The specialist in a program enrolling students with many different disabling conditions is usually expected to be a person with many competencies, prepared to work with teachers who often have no background for the task of meeting the special learning needs and problems. The specialist is often unavailable to classroom special education teachers or provides services which are all too infrequent. The special education teacher then, in day-to-day contact with the disabled child, assumes total responsibility for

providing adequate learning opportunities for all the disability areas and becomes the key to educational improvement (Jordan, 1966). It is this special education teacher's background and preparation, his knowledge and effective use of resources, and his skills that become the avenue to better learning for the children placed in his classroom. However, the preparation of the teachers who work within the multicategorical settings will vary from no preparation for certain types of disabilities to fairly complete preparation for other types of disabilities.

Bender (1985) conducted research focusing on teacher's reasons for negative attitudes toward educating multiple disabilities in the same classroom and found that few of the teachers in the study felt adequately prepared to teach the various disability areas. Bender's research indicated that the attitudes of teachers can be changed through exposure to different types of disabled children in addition to increased knowledge on how to deal with these children. The requirement of courses and/or in-service training was recommended.

One of the teachers' concerns in Bender's research (1985) was that the multicategorical classrooms would take more time in planning and more teacher time in direct instructional methods. This concern was valid as the disabled learners engaged in more verbal interactions with the teacher than nondisabled students. The extra time used for planning, instruction, and verbal interactions may not be the same for all disability areas. Therefore, the teacher may not be spending equal time and attention with each population of disabled students within the multicategorical setting. The teacher may spend the instructional time

dealing with inappropriate behaviors being exhibited by the behaviorally disordered or mentally disabled children and may have to compromise the education of the other students (Bender, 1985).

An appropriate ratio of disabled students to instructors in the multicategorical setting must be based on the needs of all the students in that setting. The level of severity of the disabilities must be taken into consideration (Bender, 1985). Frequently, effective teachers who can handle wide variances in classroom behaviors and learning deficits are overloaded with disabled children while less effective teachers escape responsibility of such diverse populations.

Bender (1985) suggests that the degree to which learning disabled and mentally disabled students are likely to imitate the inappropriate behaviors displayed by the behaviorally disordered children in the classroom is slight. However, behaviors which are disruptive to other students in the same classroom, such as acting out or hyperactivity, compromise the quality of education of the other learners. More passive forms of off-task behaviors would not be as likely to interfere as they are not as disruptive. Teacher ratings and observational methodologies indicate that behaviorally disordered and mentally disabled students emit socially undesirable behaviors in the classroom (e.g., hyperactivity, aggressiveness, and lack of task orientation) which may disrupt the entire class. Learning disabled populations, on the other hand, are more often engaged in off-task behaviors in passive ways which do not have as great a tendency to disrupt other students.

The critical aspects regarding multicategorical classroom ecology



seem to be the types of disabled children being educated, the number of students, and the level of severity of the disabling condition.

Professional staff members familiar with the special class setting and the individual student should make recommendations on which specific class a child should become enrolled in and the criteria for each placement decision.

#### Curriculum Needs for the Disabled

One of the major problems of choosing a curriculum for use in a multicategorical setting is that students vary so widely in ability level, that what would be appropriate for one student is not appropriate for another. The mildly mentally disabled population might be quite heterogeneous except for intelligence, which might vary from 50 to 70 in intelligence quotients. But if the subtests of the Stanford-Binet and Wechsler Intelligence Scale for Children are examined closer, some disabled children show greater relative strengths on the performance subtests while others will demonstrate strengths on the verbal subtests of the test (MacMillan, 1973).

Mentally disabled, learning disabled, and behaviorally disordered students vary not only by specific intellectual abilities; they also vary in personality characteristics, cultural background, inheritance, and past educational experiences. A classroom setting incorporating any or all of these populations might include children from impoverished environments who have trouble with the language, children of normal intellectual abilities whose lack of behavioral control depresses their academic performance and children who suffered prenatal or postnatal cognitive damage. The special needs of these varying types of children

obviously differ greatly as do their curriculum needs (MacMillan, 1973).

On the other hand these children do have one thing in common: they all encountered considerable difficulty in the regular classroom setting as inefficient learners of the materials taught there. The special education program should have as its major goal that these children will as adults possess the skills and attitudes needed for successful living and working in our society (MacMillan, 1973). For the mentally disabled, behaviorally disordered, or learning disabled child to be capable of independent adult living that he finds satisfying, he will have to possess vocational, personal, and social skills. Achievement of that goal for all students enrolled in the multicategorical special education setting will demand the utmost of the teacher's training and talents.

Since there is no single best curriculum to fit the variety of needs of these children, the teacher must adapt any usable curriculum to fit the particular children and geographic setting being served. The curriculum is typically designed to develop competencies in several areas. These can be divided into three major categories: occupational adequacy, social competence, and personal adequacy. The latter objective, a sense of personal adequacy, is very difficult for disabled children to develop if they are met with constant frustration and failure. The emotional well being of the child should be considered as he is educated to help him develop a sense of belonging to the class and friendships with peers. Again, this is no easy task when the teacher is confronted with such a diverse array of personalities as found in the typical multicategorical setting.

Galloway and Goodwin (1979) write on the assumption that the needs

of some mildly mentally disabled children differ in some rather fundamental way from those of ordinary children. Therefore, Galloway and Goodwin contend that education provided in the special classroom must logically differ in a similarly fundamental way from the education provided in the rest of the school. So, historically, special education classrooms were established to meet the needs of a number of difficult or slow-learning children.

Inevitably there will be a lot of compromise in special class placement. Some children who are unable to benefit at all from the ordinary curriculum because of their anxiety, lack of self-confidence, or low intelligence will find it a small price to pay to be enrolled in the restricted curriculum of a special class placement. On the other hand, the student probably isn't going to win out if the special class placement is one that will cause him to sit apathetically in the back of the room or refuse to attend school at all (Galloway and Goodwin).

Organizing a classroom's remedial provisions on the basis of one or more disabling conditions suffers from a number of practical and psychological objections, describes Galloway and Goodwin. To start with, the class size is seldom less than twelve to fifteen students so that much of the teaching has to be done in groups. Consequently, this reduces the chances of "remedying" any specific learning problems the student may have. This form of organization doesn't differentiate between children who are slow in most areas of development and all academic subjects (the mentally disabled child) and children whose difficulty is with one particular area of learning, either written language or mathematical computation, as in the case of the learning

disabled student. An unexpectedly high number of children with average or above average intelligence have serious specific learning disabilities, and they differ in a number of ways from children whose reading is several years below grade level due to low intelligence (Galloway and Goodwin).

Socially, too, there are potential difficulties in the full-time multicategorical setting. Children can easily come to regard themselves, and in turn be regarded by their peers, as members of the "slow class." Special class placement can help a child achieve some academic success, yet it may also cause the more intelligent child to become socially isolated in the multicategorical setting if he chooses not to interact with the less stimulating peers with whom he is grouped.

There is not a significant amount of research or literature available that compares achievement test scores between students who are educated in a self-contained mental disabilities classroom with those educated in a noncategorical or multicategorical setting. Gottlieb (1980) has conducted research comparing test scores of mainstreamed mentally disabled students with their nonmainstreamed disabled peers. In one of the most ambitiously planned investigations of mainstreaming, the PRIME project was carried out in Texas under the direction of the Bureau of Education of the Handicapped. This study compared 356 normal third, fourth, and fifth graders with 356 mainstreamed mentally disabled students. The results of this study revealed that the nonmainstreamed mentally disabled students made greater academic gains during the school year as measured by pretests and posttests of standardized academic tests than their mainstreamed peers. Students' attitudes toward self-esteem

and peer regard showed that the nonmainstreamed learners were more content with the school experience than those students who were mainstreamed. The mainstreamed learners were less well accepted by their peers than those in the segregated classroom situation, Gottlieb discovered. The general social/emotional picture of the mainstreamed learners was not as healthy looking as that of the nonmainstreamed populations.

#### Summary of Literature Review

In this review of literature various opinions and research on educating mildly mentally disabled children in multicategorical settings were presented. Viewpoints range from having mildly mentally disabled, behaviorally disordered, and learning disabled students enrolled in separate classrooms all day to having them enrolled in the regular mainstream of education for the entire school day. In between these two extremes exists the idea of grouping mildly mentally disabled, behaviorally disordered, and learning disabled students together into one classroom setting for academic instruction and labeling such a program "multicategorical."

The main issue raised in assigning many different categories of mildly disabled children to the same self-contained classroom is whether or not these children's disabilities require separate and diverse teaching techniques to successfully meet their needs (Cromwell, Blashfield, and Strauss, 1975). MacMillan (1977) argues that the distinction between such groups is not really valid for instructional purposes while Hobbs (1975) contends that only through accurate diagnosis of the student's ability and subsequent grouping of students with similar characteristics can an efficient treatment plan be formulated.

Categorizing children with similar needs into groups has encouraged the organization of special interest groups on behalf of a specific section of disabled youngsters. It has also assisted in the passage of legislation to aid disabled persons (Gallagher, Forsythe, Ringelheim, and Weintraub, 1975) and it is important for research purposes (Hobbs, 1975).

Some problems of educating multiple populations in one classroom setting include: vast land areas to cover, scattered populations, low incidence of specific disabilities, high costs to administer programs, and inadequate training and preparation of teaching and supervisory staff (Thorpe, Chiang, and Darch, 1981). Another obstacle to overcome is the fact that multicategorical programs take more time in planning and more teacher time in direct instructional methods (Bender, 1985). However, the extra time used for planning, instruction, and verbal interactions may not be the same for all disability areas. Therefore, the teacher may not be spending equal time and attention with each population of disabled students within the multicategorical setting.

The social relationships among the students in the multicategorical setting are also an issue worth examining. The way a student feels about his peers, his studies, and his teacher determines how much he will benefit from the classroom experience. A classroom learning atmosphere which provides emotional support, encouragement, and mutual respect is conducive to higher student self-esteem and to greater utilization of academic skills (Fox and Schmuck, 1966). Therefore, it is questionable whether or not it is possible to promote and maintain a healthy classroom atmosphere for all children when combining mildly mentally disabled, behaviorally disordered, and learning disabled students into a multicategorical setting.

## Chapter 2 References

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## Chapter 3

### Methodology

As previously stated, the purpose of this investigation was to determine if one particular type of special education setting was more conducive to greater academic gains of mildly mentally disabled students than another type of setting in the Council Bluffs Community School District. This investigation proceeded by determining if there was a different pattern of achievement gain scores in reading and mathematics between ten and eleven-year-old students educated in a mental disabilities classroom and then transferred to a multicategorical setting with learning disabled and behaviorally disordered students. Additionally, this investigation attempted to determine if parents of the mildly mentally disabled students who transferred settings perceived any change in their child's social or emotional behavior when their child made the transition to the new learning environment.

This study was designed to determine if mildly mentally disabled students placed in multicategorical settings with learning disabled and behaviorally disordered peers progress academically at a rate which is faster, slower, or the same as mildly mentally disabled students enrolled in mental disability classrooms with only mentally disabled students as peers.

This investigation involved longitudinal analysis of the academic performances of ten mildly mentally disabled students enrolled in the Council Bluffs Community School District. Students selected for the study had been diagnosed as mildly mentally disabled using the Iowa Department of Public Instruction's definition of mental disability. The

students selected for the data collection were mentally disabled to the degree that they required placement in a self-contained special education program for at least 75 percent of the school day. Students selected for the study were between the ages of ten and eleven years. All the participants in the study had been receiving special education services on a continuous basis in the Council Bluffs Community School District for at least four years. Five of the students selected had received instruction in a mental disabilities classroom for the four years for which the test scores were collected. The other five students had been educated in a mental disabilities classroom for three years and then transferred to a multicategorical setting for special education instruction during the fourth year of the study, 1984 - 1985.

Reading and mathematics scores as measured by the Woodcock Reading and KeyMath Tests were gathered on each of the ten students for the four-year period beginning with the 1981 - 1982 school year and continuing through the 1984 - 1985 school year. The standardized reading and mathematics tests had been administered individually to each student during the fall of each school year and again nine months later in the spring at the completion of the academic year. Thus, by reviewing the cumulative files of the ten students, both reading and mathematics gain scores were obtained and charted for each student for the four academic years.

These patterns of gain scores in reading and mathematics were then compared in three different contexts.

1. The individual student's pattern of gain scores were charted for the four-year period.

2. The student's pattern of gain scores enrolled in the mental disabilities classrooms were compared with other students of similar characteristics enrolled in the same type of special education program. Likewise, individual student's patterns of gain scores enrolled in the multicategorical classrooms were compared with other students enrolled in multicategorical settings.

3. The overall pattern of gain scores for the mental disabilities classrooms was compared with the pattern of gain scores for the multicategorical classrooms.

The parents of the five students who had been educated in the mental disabilities classroom for three years and then transferred to the multicategorical settings were interviewed individually by the researcher to determine if the parents perceived any noticeable change in their child's behavior or emotional development after the transfer to the multicategorical setting occurred. After the parent interview schedule was developed by the researcher, the questions were pilot tested with two parents of mildly mentally disabled students whose test scores were not being used in this investigation to determine the question's usefulness in gathering information. As a result of these pilot interviews, two of the questions were deleted entirely and three of the questions were rewritten to provide added clarity as to what kind of information was wanted. The responses to the questionnaire were tabulated and the data are summarized in Chapter 4.

Data on the students' behavior and emotional development were also obtained from the cumulative files of the five students transferred to the multicategorical setting. Attendance information and disciplinary

referrals were examined when there was documentation of such occurrences contained within the files.

## Chapter 4

### Presentation of Data and Findings

#### Procurement of Data

Special education classrooms in the Council Bluffs Community School District offer an individualized curriculum in reading and mathematics instruction. They also allow flexibility in meeting the individual student's needs. Each student has the opportunity to progress as rapidly as his/her abilities permit. Special education teachers administer individual standardized reading and mathematics tests during the fall of each school year and write individual reading and mathematics objectives for each student to complete that year. Achievement gains and test results for each academic year from 1981 to 1985 were examined from the cumulative files of each student in the study.

#### Reading Achievement Gain Scores

Table I affords a comparison of the reading achievement gain scores obtained from the cumulative records on the ten mentally disabled students involved in this longitudinal analysis. The columns headed 1981 - 1982, 1982 - 1983, 1983 - 1984, and 1984 - 1985 indicate that the data were obtained from the achievement gain made from the reading test scores administered in the fall and spring of each academic year. The Woodcock Reading Test was the device used in all the reading analyses. All the numerical values were gain scores as there were no achievement losses and data were expressed in years or parts thereof.

Table I  
 READING ACHIEVEMENT GAIN SCORES IN YEARS  
 FOR MENTALLY DISABLED STUDENTS

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Mentally Disabled Students Educated in Mental Disabilities Classroom

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Student	1981-1982	1982-1983	1983-1984	1984-1985	Average
A	.3	.4	.8	1.0	.625
B	1.0	1.0	.5	.5	.750
C	.4	.5	.5	.5	.475
D	.8	.6	.6	.5	.625
E	.6	.3	.4	.7	.500
Average	.620	.560	.560	.640	.595

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Mentally Disabled Students Educated in Mental Disabilities Classroom  
 And Transferred To Multicategorical Classrooms

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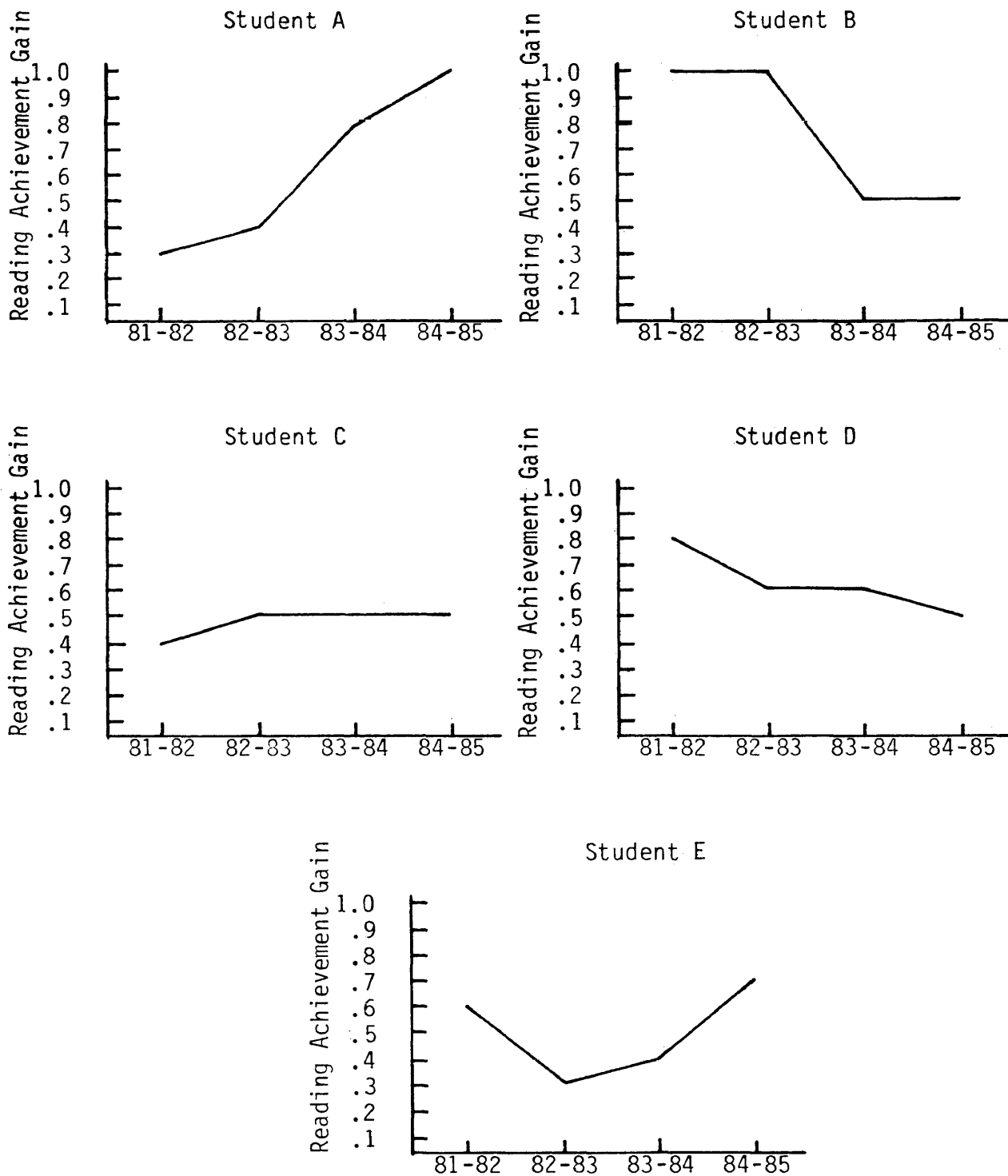
Student	1981-1982	1982-1983	1983-1984	1984-1985	Average
F	.5	.6	.8	.1	.500
G	.6	.7	.6	.3	.550
H	.4	.4	.5	.3	.400
I	.5	.6	.6	.4	.525
J	.3	.3	.4	.3	.325
Average	.460	.520	.580	.280	.460

=====

From the data presented in Figure 1, it is clear to see that there is no specific pattern of reading achievement gain scores for the five mentally disabled ten and eleven-year-old students educated continuously in mental disabilities classrooms. Student A experienced a rapid acceleration in reading achievement growth with an average yearly gain of .625 years for the four-year period the test scores were evaluated. Student B made yearly reading achievement gains of one full year during the academic years 1981 - 1982 and 1982 - 1983. He then declined in the rate of growth but continued to make steady progress with .5 years gain for the following two years, 1983 - 1984 and 1984 - 1985. Student C replicated neither of the preceding two student's patterns. Student C achieved reading gain scores at a relatively steady rate for the four-year period. His scores varied only one month from year to year with an average of .475 for the four-year period. Student D experienced a slight decline in reading achievement scores over the four-year period. He began in 1981 - 1982 with .8 years gain, followed by .6 years in 1982 - 1983, remained at .6 years in 1983 - 1984, and fell to .5 years in the final year of the study in 1984 - 1985. Student E experienced a dramatic decline during the second year of the study, falling from .6 years in reading achievement gain in 1981 - 1982 to only .3 years gain in 1982 - 1983. He then made a steady acceleration of reading achievement test scores for the remainder of the years data were collected, moving from .4 years gain to .7 years gain.

Figure 1

READING ACHIEVEMENT CURVES OF MENTALLY DISABLED STUDENTS  
EDUCATED IN MENTAL DISABILITIES CLASSROOMS





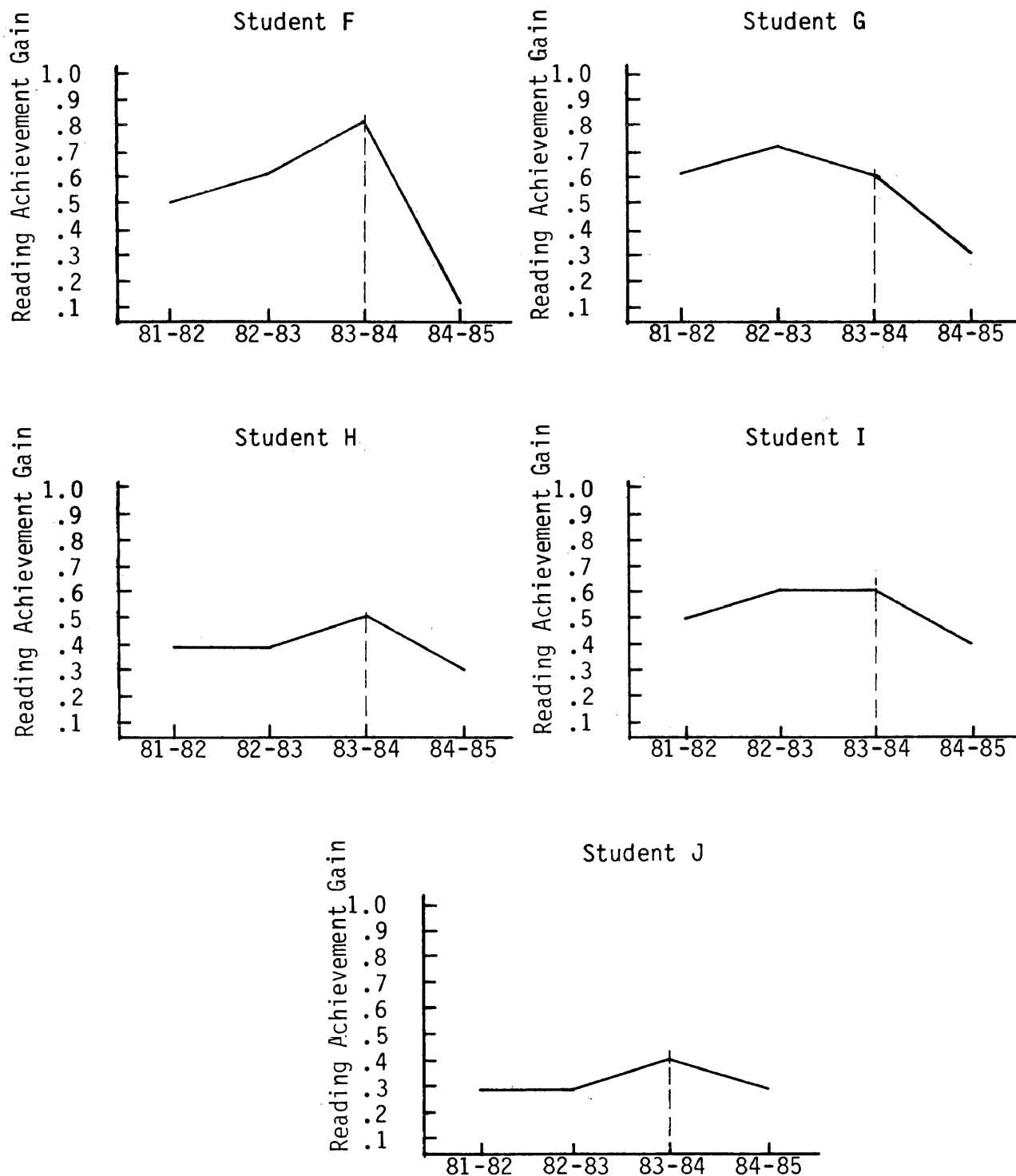
All of these five students' test scores fall into the three months to one full year of reading achievement gain. None of the five curves have the same general shape nor do any of them peak in the same direction at the same time. Students B and D have a stairstep angle that is similar in shape but Student B's decline is more pronounced than Student D's decline. The other patterns vary from an almost flat line for Student C to a v-shaped curve for Student E.

Analyzing the individual reading achievement gain patterns for the five mentally disabled students educated in a mental disabilities classroom for three years and then transferred to a multicategorical setting show a more consistent pattern. Collectively all the student's scores show the same general shape, however, some of the students experienced a greater decline than others as displayed in Figure 2.

Student F experienced a slight acceleration in reading achievement gain scores, moving from .5 years to .6 years to .8 years, until the transfer to the multicategorical classroom was made and then there was a drastic decline in gain scores. He dropped from .8 years in 1983-1984 to only .1 years gain in 1984 - 1985, a drop of .7 years in gain scores. Student G also displayed the same general pattern of reading achievement gains, that of the " $\wedge$ " shape. A slight acceleration was noted from 1981 - 1982 to 1982 - 1983 from .6 years gain to .7 years gain followed by a steady decline in gain scores from .6 years gain in 1983 - 1984 to .3 years gain in the final year of the study after the transfer. Student G obtained an average of .550 years gain for the four-year period studied, very similar to Student F's .500 years average gain.

Figure 2

READING ACHIEVEMENT CURVES OF MENTALLY DISABLED STUDENTS EDUCATED IN  
 MENTAL DISABILITIES CLASSROOM AND TRANSFERRED TO MULTICATEGORICAL  
 CLASSROOMS

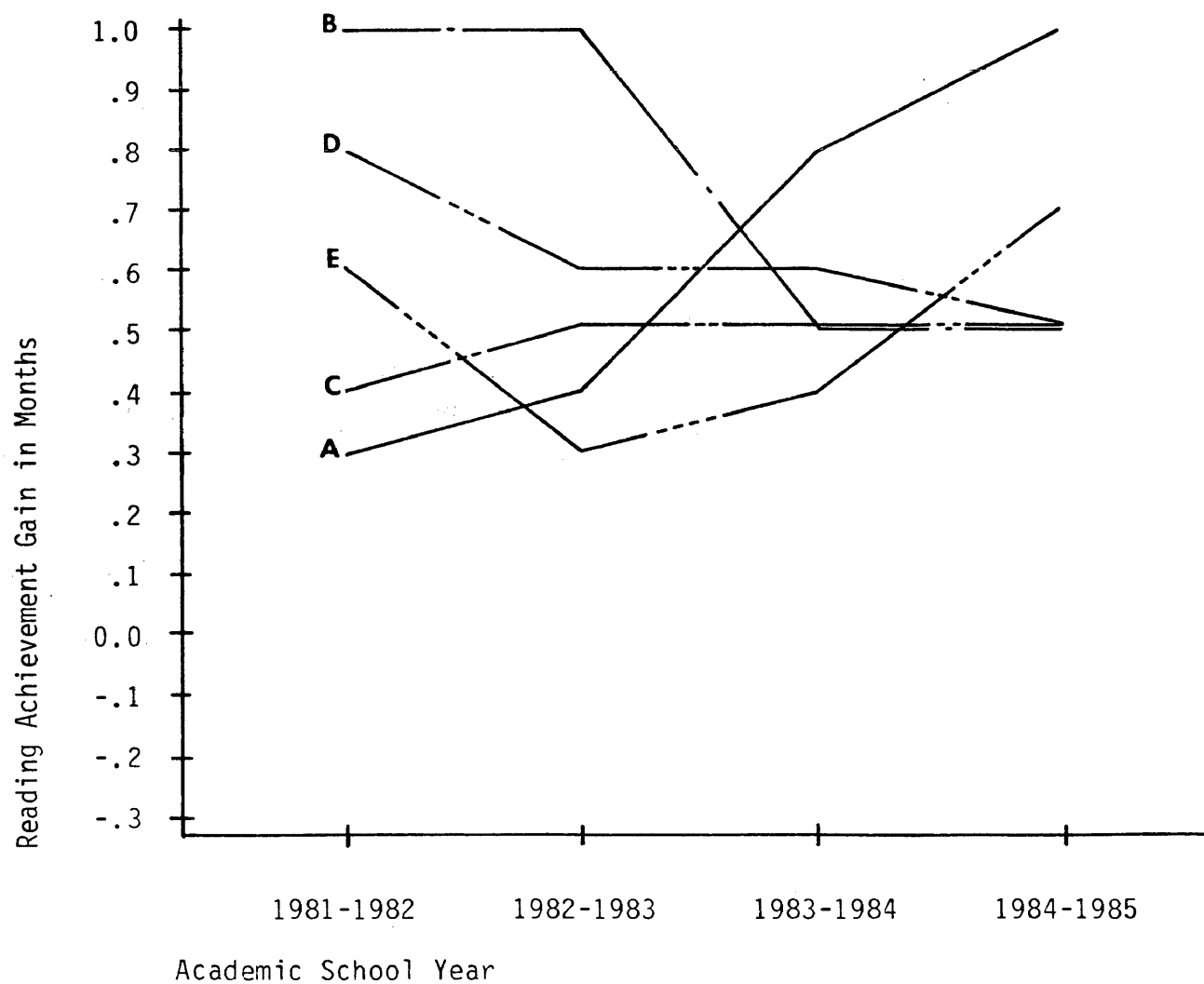


Student H had a profile that reflects stable growth in reading achievement gain scores during the 1981 - 1982 and 1982 - 1983 school years, followed by a slight acceleration of .1 year gain in 1983 - 1984, and then a decline of .2 years in gain scores after the transfer to the multicategorical classroom. Student F fits the " $\wedge$ " shaped pattern of achievement displayed by the other students who transferred classrooms. He had an average gain for the four-year period of .400 years. Student I accelerated slightly from .5 years gain in 1981 - 1982 to .6 years gain in 1982 - 1983 and then remained the same in 1983 - 1984 at a .6 years gain in reading achievement. As indicated by the other mentally disabled students who were transferred to multicategorical settings, student I also had declining gain scores in reading for 1984 - 1985 as he declined to a .4 year gain. Student I had an average gain score of .525 years for the four-year period. Student J had the " $\wedge$ " shaped pattern and was almost identical to the pattern exhibited by Student H. Student J exhibited the least amount of growth, with an average for the four-year period of only .325 years. His scores remained stable for 1981 - 1982 and 1982 - 1983 school years at .3 years gain, accelerated to .4 years gain in 1983 - 1984, and then declined in 1984 - 1985 to .3 years gain after the transfer was made.

Figures 3 and 4 display the patterns of reading achievement gain scores for the five students in the mental disabilities classrooms and the five students transferred to the multicategorical classrooms. Data is displayed for the academic years 1981 through 1985. The lack of a consistent pattern is evident in Figure 3 as compared to the " $\wedge$ " shaped pattern of reading achievement gain scores in Figure 4.

Figure 3

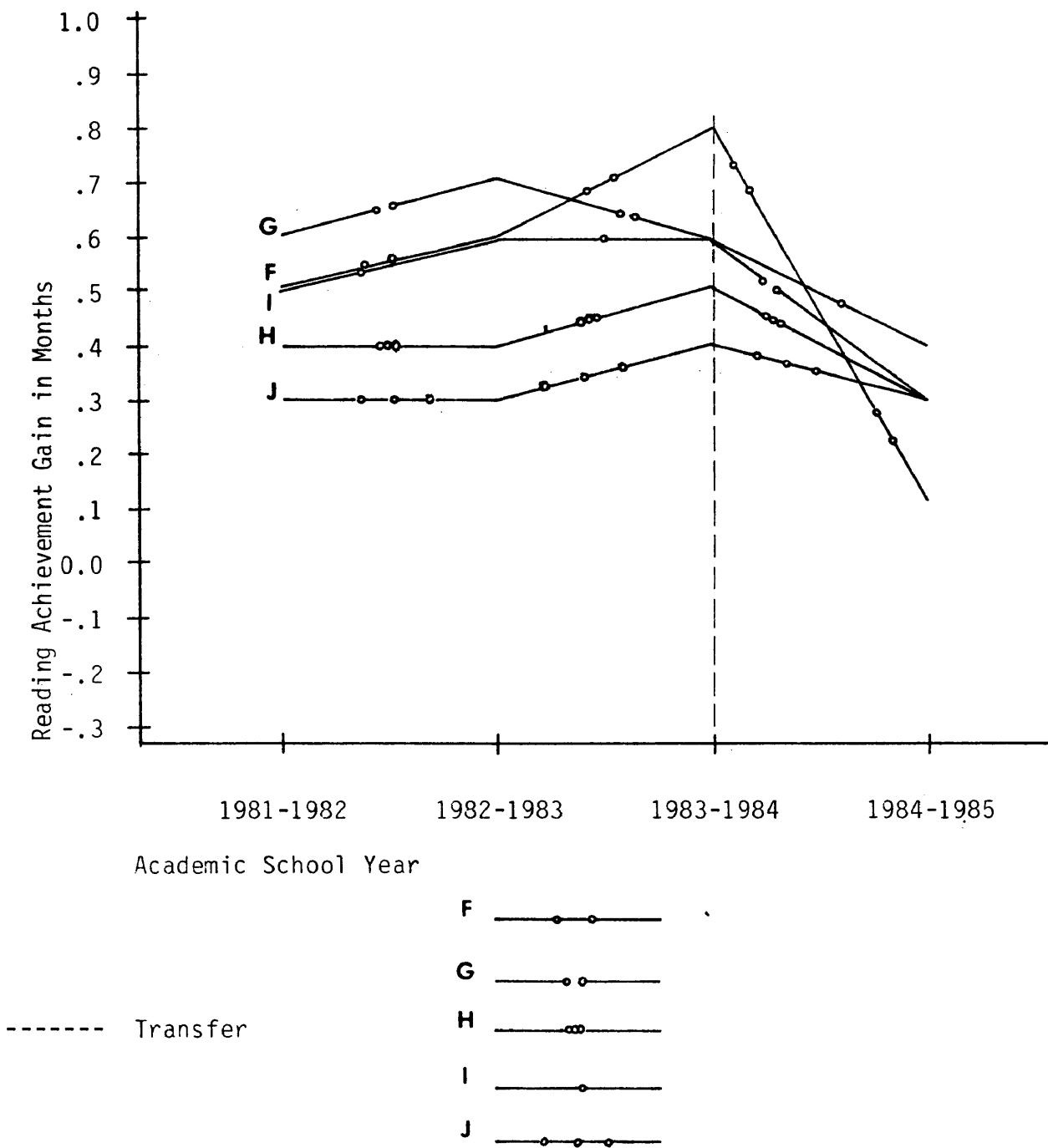
A GRAPH OF READING ACHIEVEMENT GAIN SCORES FOR MENTALLY DISABLED STUDENTS  
EDUCATED IN MENTAL DISABILITIES CLASSROOMS



- A \_\_\_\_\_
- B \_\_\_\_\_
- C \_\_\_\_\_
- D \_\_\_\_\_
- E \_\_\_\_\_

Figure 4

A GRAPH OF READING ACHIEVEMENT GAIN SCORES FOR MENTALLY DISABLED STUDENTS EDUCATED IN MENTAL DISABILITIES CLASSROOMS AND TRANSFERRED TO MULTICATEGORICAL CLASSROOMS



### Mathematics Achievement Gain Scores

Table II includes the original data collected on the ten mentally disabled students involved in the longitudinal analysis in regard to mathematics achievement gains. The KeyMath Test was the device used in all instances to obtain the gain scores measured in years or parts thereof.

From Figure 5 one can compare the individual student's pattern of gain scores over the four-year period for the five mentally disabled students educated continuously in the mental disabilities classrooms. These individual curves show a pattern of similarity as they all show increased achievement in mathematics. The pattern looks like this



Student A experienced a slight acceleration in mathematics achievement growth over the four-year period with an average gain of .350 years. Scores remained stable from 1981 - 1982 to 1982 - 1983 with .3 years gain each year, accelerated slightly in 1983 - 1984 to .4 years gain and remained there for 1984 - 1985. Student B experienced a .1 year decline in gain scores from 1981 - 1982 to 1982 - 1983, but then accelerated to .7 years gain in 1983 - 1984. Another slight acceleration was noted the following year for an overall achievement gain average for the four-year period of .650 years. Student C made continuous mathematics achievement gains the first three years of the study, with .2 years gain in 1981 - 1982, .5 years gain in 1982 - 1983, and .6 years gain in 1983 - 1984. Achievement remained at .6 years gain for the final year of the study in 1984 - 1985. Student C's average was .475 years gain for the four-year period. Student D also experienced the

The figure is a simple line graph consisting of three segments: a horizontal line on the left, a line segment sloping upwards from the end of the first horizontal line, and a second horizontal line extending to the right from the top of the sloped segment.

Table II  
 MATHEMATICS ACHIEVEMENT GAIN SCORES IN YEARS  
 FOR MENTALLY DISABLED STUDENTS

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Mentally Disabled Students Educated in Mental Disabilities Classroom

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Student	1981-1982	1982-1983	1983-1984	1984-1985	Average
A	.3	.3	.4	.4	.350
B	.6	.5	.7	.8	.650
C	.2	.5	.6	.6	.475
D	.4	.6	.6	.7	.575
E	.3	.2	.3	.3	.275
Average	.360	.420	.520	.560	.465

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Mentally Disabled Students Educated in Mental Disabilities Classroom  
 And Transferred To Multicategorical Classrooms

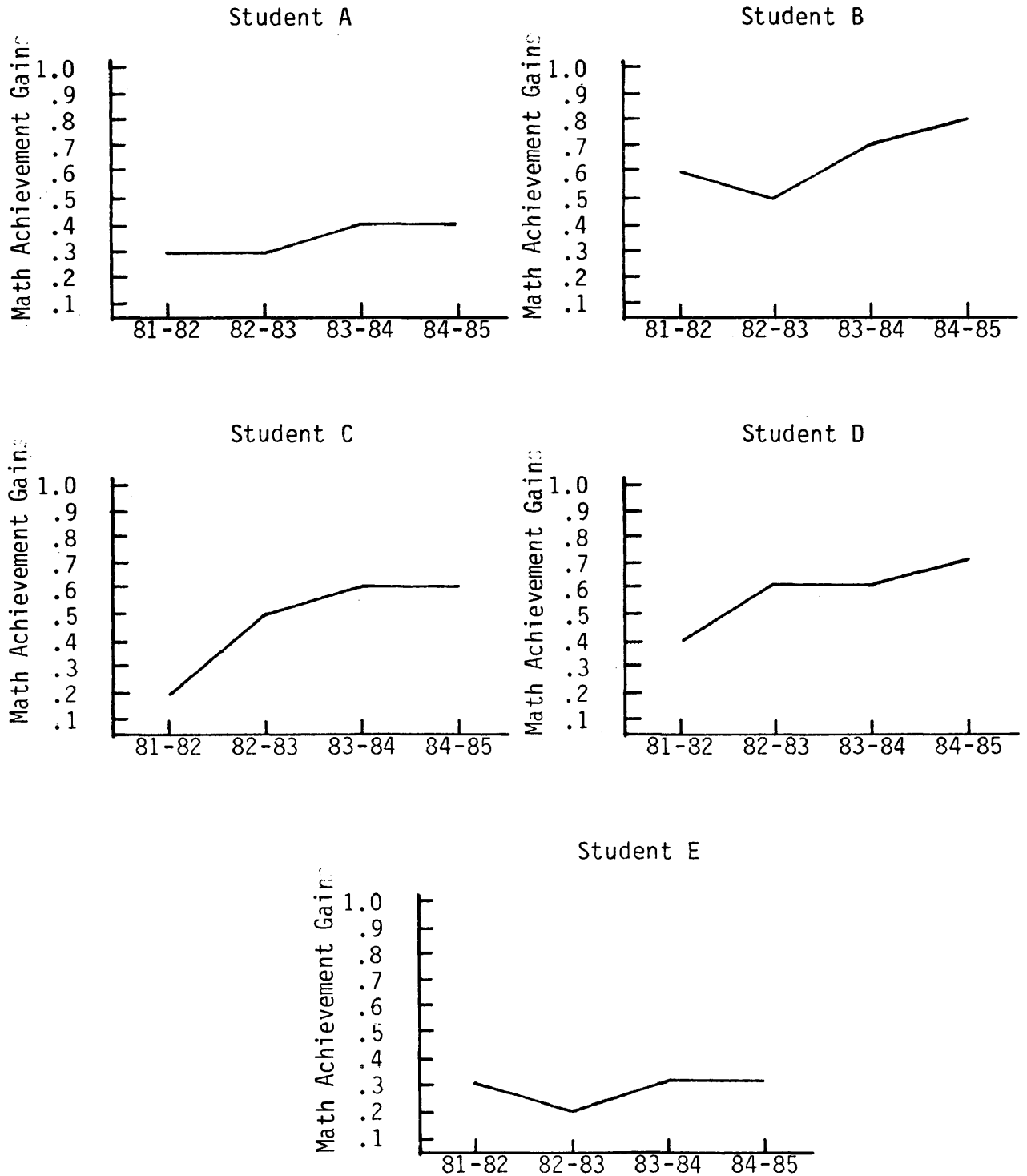
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Student	1981-1982	1982-1983	1983-1984	1984-1985	Average
F	.6	.6	.7	.4	.575
G	.6	.6	.5	.5	.550
H	.3	.4	.5	.3	.375
I	.4	.6	.4	.3	.425
J	.2	.4	.7	.5	.450
Average	.420	.520	.560	.400	.475

=====

Figure 5

MATHEMATICS ACHIEVEMENT CURVES OF MENTALLY DISABLED STUDENTS  
EDUCATED IN MENTAL DISABILITIES CLASSROOMS





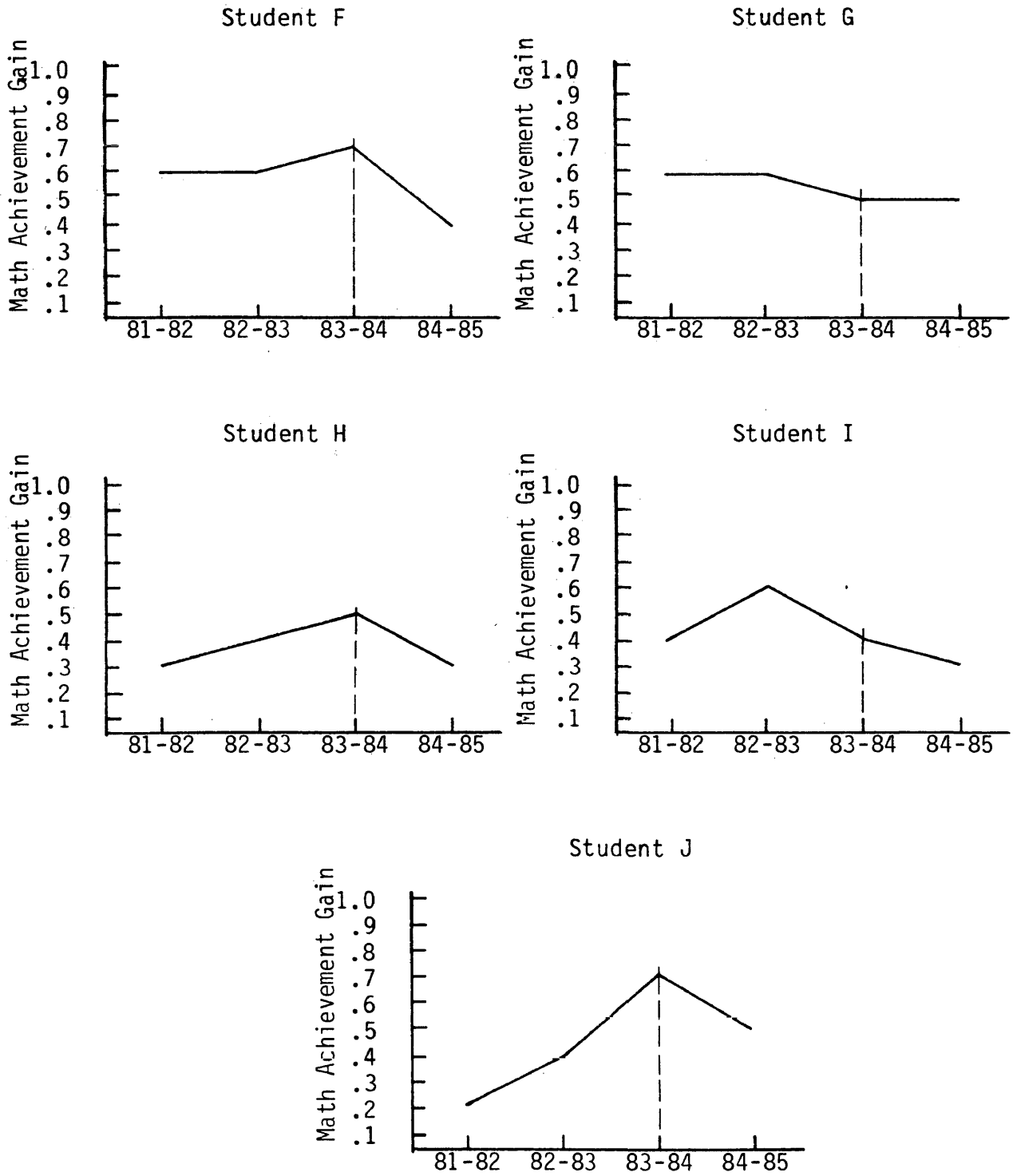
pattern of achievement. He made .4 years gain in 1981 - 1982, .6 years gain in 1982 - 1983, remained stable in 1983 - 1984 at .6 years gain, and then accelerated slightly to .7 years gain in 1984 - 1985. He obtained a .575 years average gain in mathematics achievement scores for the four-year period from 1981 - 1985. Student E experienced a slight decline from 1981 - 1982 to 1982 - 1983 moving from .3 years gain to only .2 years gain in mathematics achievement scores. Student E then regained the former rate of .3 years gain in 1983 - 1984 and remained there for the remainder of the study for an average achievement gain of .275 years.

Figure 6 compares the individual student's pattern of gain scores over the four-year period for the students who were educated in a mental disabilities classroom for three years and then transferred to a multicategorical setting. There is a consistent pattern among these students' gain scores in the " $\wedge$ " shaped design as was recognized in the data collected on this same group's reading scores as displayed in Figure 2.

Student F had mathematics achievement scores that remained stable during 1981 - 1982 and 1982 - 1983 at .6 years gain for each year. He then accelerated to .7 years gain in 1983 - 1984 but declined sharply upon the transfer to the multicategorical setting in 1984 - 1985 with a gain of only .4 years in mathematics. His average gain for the four-year period was .575 years. Student G had stable gain scores for the 1981 - 1982 and 1982 - 1983 school years at .6 years gain and then declined before the transfer to the multicategorical setting was made in 1983 - 1984 to .5 years gain. Interestingly, no further decline in mathematics achievement gain were made after the transfer. Student G's scores held

Figure 6

MATHEMATICS ACHIEVEMENT CURVES OF MENTALLY DISABLED STUDENTS EDUCATED IN MENTAL DISABILITIES CLASSROOM AND TRANSFERRED TO MULTICATEGORICAL CLASSROOMS



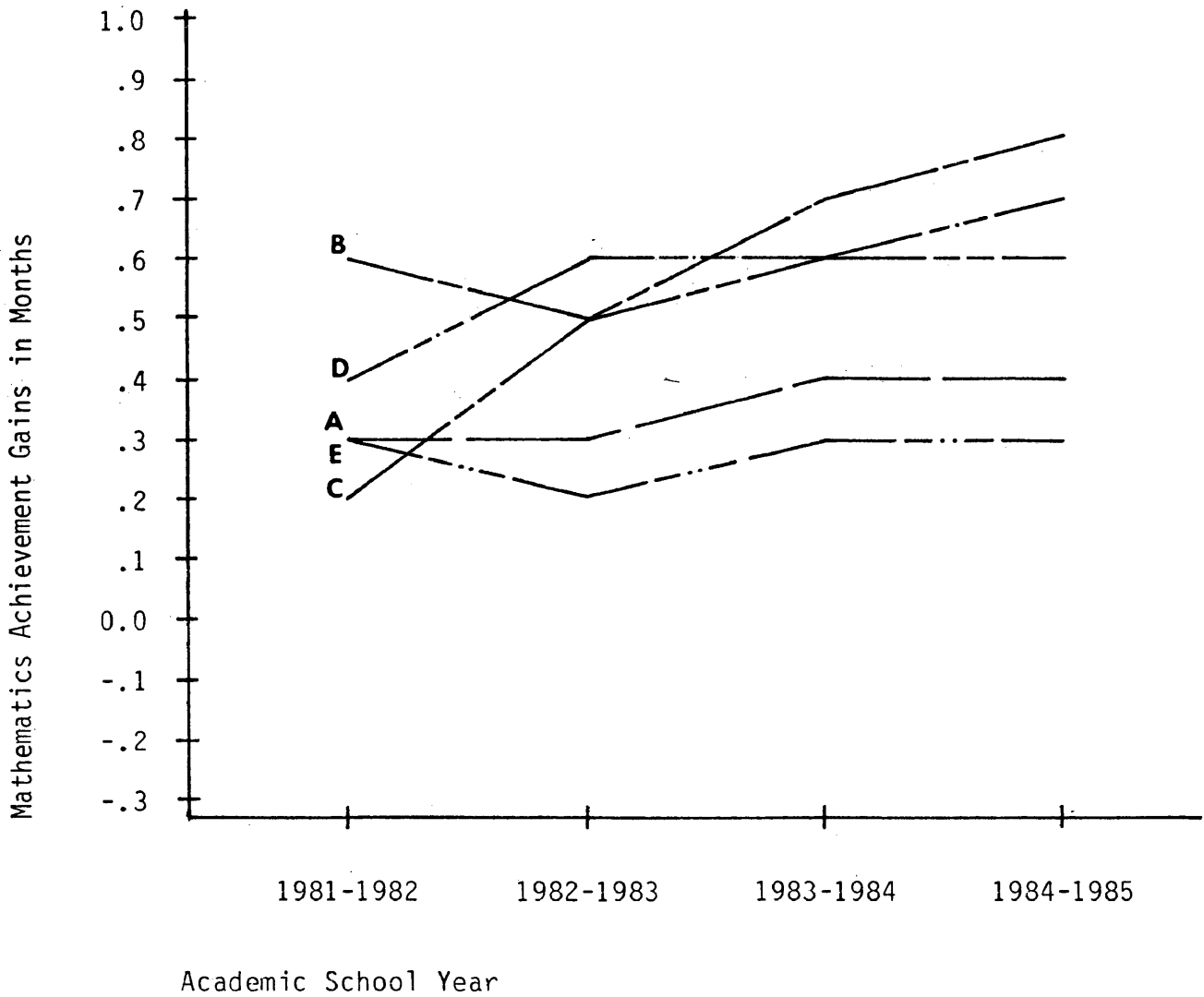
----- Transfer

stable at .5 years gain after the transfer was made in 1984 - 1985. His average for the four-year period was .550 years gain. Student H made steady acceleration from 1981 through 1984 with mathematics achievement gain scores of .3 years, .4 years, and .5 years gains. However, upon transferring to the multicategorical setting in 1984 - 1985, Student H's scores declined to .3 years gain. His average for the four-year period was .375 years. Student I experienced the decline in mathematics achievement scores a year prior to the transfer as did Student G. His scores accelerated from .4 year gain in 1981 - 1982 to .6 years gain in 1982 - 1983, but then began to decline in 1983 - 1984 to .4 years gain and continued to decline to .3 years gain after the transfer in 1984 - 1985. His average for the four-year testing period was .425 years gain. Student J's achievement scores in mathematics adhere to the " $\wedge$ " shaped pattern displayed by the other students in this group. Student J experienced a steady acceleration in mathematics achievement scores for the first three years of the study, moving from .2 years gain to .4 years gain to .7 years gain and then declining after the transfer to .5 years gain. His average for the four-year period was .450 year gain.

Figures 7 and 8 allow a comparison of the overall patterns of gain scores for the mental disabilities classrooms with the pattern of gain scores for the students transferred to the multicategorical classrooms.

Figure 7

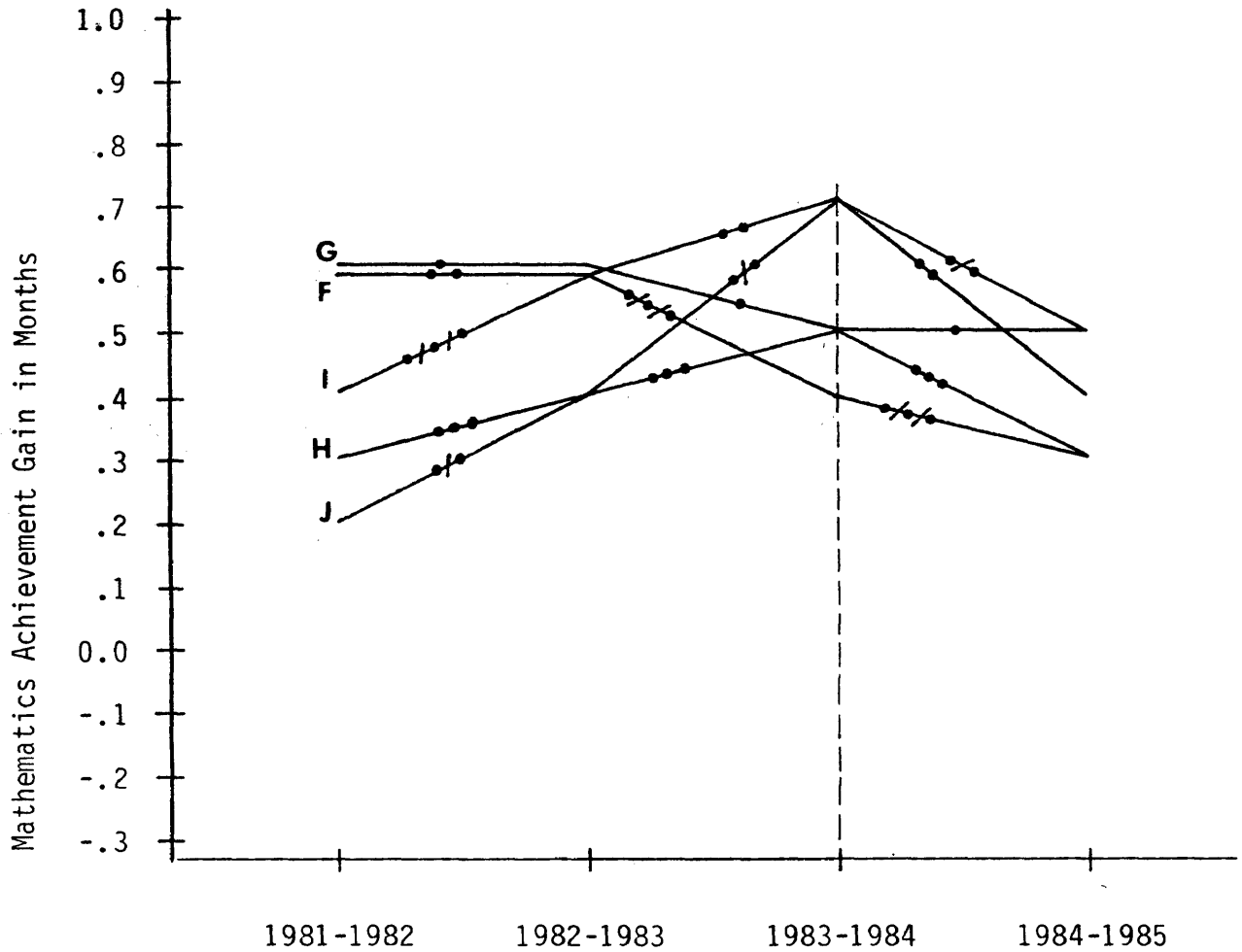
A GRAPH OF MATHEMATICS ACHIEVEMENT GAIN SCORES FOR MENTALLY DISABLED STUDENTS EDUCATED IN MENTAL DISABILITIES CLASSROOMS



- A \_\_\_\_\_
- B \_\_\_\_\_
- C \_\_\_\_\_
- D \_\_\_\_\_
- E \_\_\_\_\_

Figure 8

A GRAPH OF MATHEMATICS ACHIEVEMENT GAIN SCORES FOR MENTALLY DISABLED STUDENTS EDUCATED IN MENTAL DISABILITIES CLASSROOMS AND TRANSFERRED TO MULTICATEGORICAL CLASSROOMS



Academic School Year

F ————

G ————

H ————

I ————

J ————

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Table III

MEAN AND STANDARD DEVIATIONS FOR 1984 - 1985 READING AND MATHEMATICS  
ACHIEVEMENT GAIN SCORES

<p>=====</p> <p>Reading Achievement Values for Mentally Disabled Students Educated In Mental Disabilities Classrooms</p> <p>=====</p>		
$\Sigma X = 3.2$		
$\bar{X} = .64$		Standard Deviation = .3795
$N = 5$		
<p>=====</p> <p>Reading Achievement Values for Mentally Disabled Students Educated In Mental Disabilities Classrooms and Transferred to Multicategorical Classrooms</p> <p>=====</p>		
$\Sigma X = 1.4$		
$\bar{X} = .28$		Standard Deviation = .5640
$N = 5$		
<p>=====</p> <p>Math Achievement Values for Mentally Disabled Students Educated In Mental Disabilities Classrooms</p> <p>=====</p>		
$\Sigma X = 2.8$		
$\bar{X} = .56$		Standard Deviation = .1856
$N = 5$		
<p>=====</p> <p>Math Achievement Values for Mentally Disabled Students Educated In Mental Disabilities Classrooms and Transferred to Multicategorical Classrooms</p> <p>=====</p>		
$\Sigma X = 2.0$		
$\bar{X} = .40$		Standard Deviation = .1000
$N = 5$		
<p>=====</p>		

### Mean and Standard Deviations of Gain Scores

Table III allows an easy comparison of the mean and standard deviations for the ten students' test scores in reading and mathematics achievement for the 1984 - 1985 school year after the transfer was made by five of the students to the multicategorical classrooms. Students who remained in the mental disabilities classrooms had higher mean scores in both reading achievement (.64 years gain) and in mathematics achievement (.56 years gain) as compared to students who were educated in mental disabilities classrooms and then transferred to multicategorical classrooms. These students who transferred had mean scores of .28 years gain in reading achievement and .40 years gain in mathematics achievement.

The standard deviations for the students educated continuously in the mental disabilities classrooms were .3 years for reading achievement and .18 years for mathematics. The standard deviations for the mentally disabled students who were transferred to multicategorical classrooms were greater in reading (.5 years) but smaller in mathematics (.1 years).

### Parent Interviews

All of the parents interviewed had ten or eleven-year old mildly mentally disabled children who were enrolled in a multicategorical program during the 1984 - 1985 school year with other mentally disabled, learning disabled, and behaviorally disordered children in the Council Bluffs Community School District. Four of the students were males and one of the students was a female. Students were enrolled in the special education programs at Rue, Tinley, and DeForest Elementary Schools while being educated in the multicategorical programs. Four mothers were

interviewed, and one couple consisting of both the father and the mother of the mentally disabled student were interviewed.

All of the parents interviewed noticed slight changes in their child's attitude toward school and their teacher. The parents of the four males noticed problems in their sons being able to deal with criticism when asked to correct an inappropriate behavior, but it should also be noted that these four students had problems dealing with verbal reprimands prior to the transfer to the multicategorical settings as their parents perceived them. The female student did not have problems accepting criticism before or after she transferred to the multicategorical setting, and in fact, may have become somewhat more withdrawn and isolated after the transfer.

Three of the parents interviewed noticed changes in their child's use of profanity during the 1984 - 1985 school year when their child was transferred to the multicategorical setting. One of the parents noticed a significant increase in the use of slang words or popular expressions during the fourth year of special education intervention in 1984 - 1985. The mother felt her son had begun to imitate role models from television shows and motion picture shows. She felt strongly that her son was also influenced by similar usage of popular expressions by his classmates since they were observed using some phrases and gestures popularized by "Mr. T" while her son's classmates were visiting in her home.

One of the parents noticed that her son began to set some short-term goals for himself after the transfer to the multicategorical programs was made in 1984. The mother felt this goal setting may have been the result of the teacher emphasizing training the students to set goals for



themselves in the areas of work completion skills and on-task behaviors within the classroom environment. Her son also began to establish rewards for himself at home upon attainment of his short-term goals. Several of the parents perceived changes in their child's behavior in regard to talking back or arguing with the parents when they felt they had been unjustly disciplined.

None of the parents perceived any differences in their child's ability to help around the house with housekeeping tasks after the transfer was made to the multicategorical setting as compared to previous years. That is to say that students who were formerly responsible for helping out around the house continued to assume that responsibility, while those who were less apt to be responsible for self-help skills did not make any significant changes in developing responsibility.

Three of the parents felt their children had developed more aggressive means of attracting attention at home after the transfer to the multicategorical program, but parents could not decide if this was a result of their child's maturation or if it was due to their exposure to and interactions with students who display more destructive and inappropriate behaviors. Again, parents mentioned that their children engaged in more verbally aggressive assaults with their siblings and their parents when things did not go their way, and more talking back to persons in authority when asked to complete a task. In general, parents tended to perceive a more defensive attitude in their children after the transfer to the new program.

From both the parent interviews and the cumulative records, it was determined that the students' frequencies of absences did not alter

significantly after the transfer to the multicategorical setting as compared to the three years the students were enrolled in mental disabilities programs. Semester absenteeisms continued to average about three times per semester.

Overall, the parents felt their son's or daughter's opinion of himself or herself seemed to be one of more self-confidence but four of the parents remarked that they felt their children were still markedly more isolated from other children because of their lower intelligence and lack of adequate social skills. Parents felt their children still had few close friends to interact with and continued to seek out friendships with children who were chronologically two to four years younger than they were. Parents felt the schools were not doing enough to get their disabled children involved in extracurricular activities. They felt their children rarely interacted with other students outside the classroom, either during or outside of regular school hours.

All five of the parents interviewed mentioned a concern about their child's grades after transferring to the multicategorical setting. They felt their children were not receiving enough individualized help with assignments and, therefore, were not learning as much as quickly as they had been in the mental disabilities classroom.

## Chapter 5

### Summary, Conclusions, and Recommendations

#### Summary

It was the purpose of this study to review data on ten students in the areas of reading and mathematics achievement to determine if one particular type of special education setting was more conducive to greater academic gains for mildly mentally disabled students than another type of setting in the Council Bluffs Community School District.

The writer reviewed literature related to this study. Various opinions and research on educating mildly mentally disabled students in different types of special education programs were presented. Both advantages and disadvantages of educating students with various disabling conditions in the same special education classroom were discussed.

Data were collected covering a four-year period from 1981 to 1985 on the ten mildly mentally disabled students using reading and mathematics scores as measured by the Woodcock Reading and KeyMath Tests. Data were gathered on five students educated continuously in a mental disabilities program and on five students educated in a mental disabilities program for three years and then transferred to a multicategorical program with other mentally disabled, learning disabled and behaviorally disordered students.

Each individual student's gain scores were charted for the four-year period. Students enrolled in the same type of special education program were compared with each other to determine if there was a pattern of development in reading and mathematics gain scores. The overall pattern of gain scores of the mental disabilities classrooms were compared with

the pattern of gain scores for the multicategorical classrooms.

Interviews were also conducted with parents of the five students who were transferred to the multicategorical settings to determine if their parents perceived any noticeable change in their child's behavior or emotional development after the transfer to the multicategorical setting.


### Conclusions

Although there was considerable variability across the single subjects with respect to the beginning grade level of reading and mathematics scores, inspection of the graphed data substantiates that systematic gains in the acquisition of reading and mathematics occurred in both the mentally disabled population educated in the mental disabilities classrooms and the mentally disabled population transferred to the multicategorical classrooms.

Further inspection, however, reveals that the mentally disabled students educated continuously in the mental disabilities classrooms made slightly greater gains in reading and mathematics than those students who were transferred to a multicategorical setting. During the 1984 - 1985 school year, the mentally disabled students educated in the mental disabilities classrooms averaged .640 years reading achievement gain while those students transferred to the multicategorical settings averaged only .280 years in reading achievement gain. All five of the mentally disabled students transferred to the multicategorical setting made less reading achievement gains in 1984 - 1985 as compared to their scores in 1983 - 1984. Student F made .7 years less growth between the two years for the greatest discrepancy and Student J made .1 years less growth for the least discrepancy.

There was no specific pattern of reading achievement gain scores for the five mentally disabled students educated continuously in the mental disabilities classrooms. The five students who transferred to the multicategorical setting for the 1984 - 1985 school year show a more consistent pattern of achievement. Collectively, all the student's scores show the same general shape, however, as previously mentioned, some of the students experienced significantly less reading achievement gains than others. Overall, there was a definite " ^ " shaped pattern of achievement gain scores in reading for the group of students who transferred to the multicategorical classrooms.

The mathematics achievement gain scores for the mentally disabled students educated in the mental disabilities classrooms averaged slightly higher for the 1984 - 1985 school year than those of the mentally disabled students who transferred to the multicategorical classrooms. Students educated continuously in the mental disabilities classrooms averaged .560 years in mathematics achievement gains while students who were transferred to the multicategorical classrooms averaged only .400 years gain.

There was a similar pattern of mathematics achievement gain scores for the five mentally disabled students educated in the mental disabilities classrooms for the four-year period. These graphs show a slight increase in mathematics achievement except Student E who continued to maintain the same rate of gain over the four-year period. These students' curves resemble a pattern like this . As was the case with the reading scores, the group of students who transferred to the multicategorical classrooms for the 1984 - 1985 school year also

showed a definite "∧" shaped pattern of achievement gain scores in mathematics.

Data from the parent interviews revealed that the parents generally noted some slight changes in the ways their children demanded attention at home. The students displayed more aggressive means of getting attention from their parents and developed a new repertory of behaviors after being transferred to the multicategorical classrooms in 1984 - 1985. Parents attributed these changes in behaviors to their children imitating other students in the same classroom as the students were observed using these behaviors while visiting in the homes of their classmates. These findings are consistent with data found in the cumulative records during the 1984 - 1985 school year, too, as four of the five students showed an increase in the number of verbal disruptions in the classroom and increased use of verbal aggression toward the teacher and the other students as compared to previous years.

Even though semester absenteeism continued to average three absences per semester for the students transferred to the multicategorical classrooms, parents noticed a drop in academic performance for their child as indicated by report card grades for the 1984 - 1985 school year. Overall, parents noted that their children spent less time doing homework and seemed less enthusiastic about preparing lessons for school. A decline was also noted in the frequency of these children engaging in conversations about their academic performance in school with their parents.

Further research would determine whether or not the decline in reading and mathematics achievement gain scores would continue for the

students who transferred to the multicategorical classrooms. One might speculate that as the students adjust to the new learning environment and begin to develop new peer relations, their academic achievement might begin to improve.

The empirical validity of this study must take into account the maturation of all the students involved in the data collection both in the mental disabilities classrooms and the multicategorical classrooms. As these mildly mentally disabled students age chronologically, they may appear to make less significant academic gains. As mathematics and reading curriculum objectives begin to stress higher-level cognitive problem-solving skills, it may take these students longer to acquire these skills, and some of the objectives may not be attainable at all. Eventually, a mildly mentally disabled student with an intelligence quotient in the 65 to 75 range may reach a peak beyond which he does not have the capacity to make further academic gains. It remains to be determined at exactly what point an individual will meet such a peak, but if the reading and mathematics scores accumulated in this study were charted for another three or four years, a definite pattern of leveling off would generally be anticipated.

Another concern with the results of the study is the possible effect of the interference of prior treatment of these students. The students' acquisition of reading and mathematics objectives taught during the 1984 - 1985 school year may not really begin to show up on test scores until the following academic school year. As the mildly mentally disabled students' degree of maturation begins to require instruction in the vocational, social, and independent living domains, less emphasis will be

placed on the presentation of reading and mathematics content areas.

### Recommendations

As a result of this investigation, the following recommendations are made:

1. Both types of special education programs for the mildly mentally disabled students should be continued in the Council Bluffs Community School District. Data revealed that both types of special education programs promoted academic achievement gains in mentally disabled students.

2. Teachers of the mildly mentally disabled enrolled in the special education programs should be aware of the changes in the parents' perceptions of their children after they have transferred to a new classroom setting. This will enable teachers to systematically instruct the students in areas of social skills that need improvement.

Methodological recommendation for future study of optimal placements for mildly mentally disabled students are:

1. Data should be collected on a larger sampling of students.

2. Interview analyses should be extended to include parents of students who remained in the mental disabilities classrooms and teachers of the students enrolled in both the mental disabilities and multicategorical classrooms.

3. Students enrolled in both the mental disabilities classrooms and the multicategorical classrooms should be evaluated periodically in regard to problem behavior areas and self-concept development.

Future longitudinal studies on academic achievement gains of mildly mentally disabled students may reveal a preference for one type of



program model over another. Currently, however, the differences in academic achievement gains between the students educated in the mental disabilities programs and students educated in the multicategorical programs is so slight that it is difficult to conclude that either type of program is definitely superior.

## APPENDIX A

## QUESTIONNAIRE FOR PARENTS

1. Please state your child's full name and present age.
2. What is your child's current special education placement? Please state the building, type of program, and teacher's name, if known.
3. How many years has your child been in his/her current special education placement? Where was he/she enrolled previously?

Questions 4 through 11 pertain to the 1984 - 1985 school year when your child was transferred from the mental disabilities program where he/she had been educated for three years to the multicategorical setting at \_\_\_\_\_ School. (Fill in name of school where student was transferred to.)

4. Did you observe any changes in your son's/daughter's attitude toward criticism after your child was transferred to the new special education setting? Did your child attempt to correct his/her behavior after being criticized?
5. Did you notice any difference in your child's use of inappropriate language or profanity between the years your child was in the mental disabilities room compared to the year he/she was transferred to the new setting?
6. Did you notice any change in behavior when your child was transferred to the new setting at \_\_\_\_\_ School? If you noticed any change in your child's behavior, do you think it was brought about because of the teacher, the other students in the classroom, or the child himself/herself?

7. Did you notice any change in your son's/daughter's volunteering to help around the home when he/she was transferred to the new school setting?
8. Did you perceive any changes in the way in which your child sought attention at home between the time he/she was in the mental disabilities classroom and the time he/she was transferred to the program at \_\_\_\_\_ School?
9. Did you notice your child acquiring any new behaviors that you could attribute to him/her imitating other students in the classroom to which he was transferred that he/she did not exhibit previously? Why do you feel these behaviors were directly influenced by other children in the same classroom?
10. Did you son's/daughter's attendance decrease, increase, or remain about the same during the time he/she was transferred to the setting at \_\_\_\_\_ School as compared to the previous years in the mental disabilities room?
11. Overall, how would you rate your son's/daughter's opinion of himself/herself during the year he/she was transferred to \_\_\_\_\_ School? Did he/she seem more content, less content, or about the same as compared with the years he/she was enrolled in the mental disabilities room?

APPENDIX B

# Council Bluffs Community School District

CENTRAL ADMINISTRATION OFFICES  
207 SCOTT STREET COUNCIL BLUFFS, IOWA 51501

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December 6, 1985


Lana Huether  
Edison Elementary School  
2218 3rd Avenue  
Council Bluffs, Iowa 51501

Dear Lana,

I have reviewed your field project proposal which you would like to initiate in the Council Bluffs Community School District, effective spring term 1986. I am pleased to inform you that the project has my endorsement. Please check with those building principals for their approval.

Best of luck! I would appreciate a copy of the completed study. Thank you.

Sincerely yours,

  
\_\_\_\_\_  
Michael Nuschy, Ed.D.  
Supervisor of Special Services

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