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Does mainstreaming positively influence academic achievement and self-concept at the elementary level?

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**DOES MAINSTREAMING POSITIVELY INFLUENCE ACADEMIC
ACHIEVEMENT AND SELF-CONCEPT AT THE ELEMENTARY
LEVEL?**

By

Tracy L. Morse

A Thesis

Submitted in partial fulfillment of the requirements of the Master of Arts Degree
in the Graduate Division of Rowan College
May 1996

Approved by

Professor

Date Approved 5/6/96

ABSTRACT

Tracy L. Morse

**Does Mainstreaming Positively Influence Academic Achievement and Self-
Concept at the Elementary Level?**

1996

Dr. Margaret M. Shuff

Learning Disabilities

Within the past decade and a half, considerable discussion has occurred regarding the most appropriate setting within which to educate students with disabilities.

This study looks at classified students in two different settings. It will compare the academic achievement levels and self-concept of students who are classified P.I. and receive instruction in a regular class with in-class support to those students who are classified P.I. and receive instruction in a self-contained classroom.

There are 12 participants in this study. Seven of the participants are in a self-contained classroom. All are of 3rd or 4th grade level. Two participants are in a regular 3rd grade class and three are in a regular 4th grade class with in-class support.

Academic achievement levels were assessed by a pre-test and post-test using the reading and math subtests of the Woodcock Johnson Psycho-Educational Battery Revised. Self-concept levels were measured by a pre-test and post-test by using a modified version of the Piers Harris Self-Concept Inventory. Between group comparisons were conducted using 2-tailed t-tests. Also, within group comparisons were conducted using paired t-tests.

Overall, neither group showed a significant difference in academic achievement levels or self-concept levels.

Results suggest that there were no significant differences between or within groups in either achievement or self-concept.

MINI - ABSTRACT

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Concept at the Elementary Level?**

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Dr. Margaret M. Shuff

Learning Disabilities

Within the past decade and half, considerable discussion has occurred regarding the most appropriate setting within which to educate students with disabilities.

Academic achievement levels of students who are classified and in a regular class with in-class support were compared to students who are classified and in a self-contained classroom, using the reading and math subtests of the Woodcock Johnson Psycho-Educational Battery Revised. self-concept levels were also compared using portions of the Piers Harris Self-Concept Inventory.

Overall, neither group showed a significant difference in academic achievement or self-concept level.

Results suggest that there were no significant differences between or within groups in either achievement or self-concept.

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Chapter I

Introduction

Within the past decade and a half, considerable discussion has occurred regarding the most appropriate setting within which to educate students with disabilities. Most recently, two somewhat congruent efforts have emerged: the regular education initiative (Will, 1986) and the full-inclusion initiative (The Council for Exceptional Children, 1993). Even though some overlap exists between the two, the former has generally dealt with students with mild to moderate disabilities, whereas the latter has generally focused on students with severe disabilities. Both initiatives evolved from the so-called *mainstreaming* movement that originated with the least restrictive environment clause of the Education of All Handicapped Children Act of 1975 and subsequent amendments to that Act (now known as the Individuals with Disabilities Education Act, IDEA). Both initiatives promote educating children with disabilities within the general education classroom setting (Sale & Carey, 1995).

According to Stainback, Stainback, and Jackson (1992), the main principles of the inclusion concept are as follows:

All children must be included in both the educational and social life of their schools and classrooms.

The basic goal is to not leave anyone out of school and classroom communities from the very beginning (thus, integration can be

abandoned since no one has to go back to the mainstream).

The focus shall be on the support needs of all students and personnel.

When considering the possible effects of full inclusion of students with disabilities in the general education classroom, several questions arise. One is how do these children fare in the regular education classroom, both socially and academically? Other questions involve teacher acceptance of, and interaction with, these children and how children without disabilities benefit from, or are affected by, the inclusion of children with disabilities (Sale & Carey 1995).

Integrating children with disabilities into general education classrooms has sparked many debates over the past few decades. The literature on mainstreaming, inclusion, and the regular education initiative provides only a few studies of achievement, social interaction, or social status factors that benefit or impede the education of children with disabilities and their peers.

In spite of the differences received among study results and the overwhelming number of variables associated with establishing success with inclusion, the call for full inclusion continues (National Association of State Boards of Education, 1992). Many states have begun to move toward a commitment to full-inclusion schools. As full-inclusion programs and schools appear across the United States, the aggregation of research data regarding the academic, social, and community status of children with disabilities is critical (Sale & Carey, 1995).

Research Question

The present study will attempt to compare the levels of achievement and self-concept of students in a third and fourth grade self-contained perceptually-impaired (P.I.) classroom to third and fourth grade perceptually-impaired students receiving in-class support. I wish to investigate the following question: Are the students in this district that are classified perceptually-impaired and receive in-class support achieving at a higher level academically? And, do these students have higher self-concepts than those students who are also classified perceptually-impaired and receive instruction in a self-contained classroom?

Limitations

There will be several limitations to this study. First, this is not a full-inclusion school district. The experimental group that will be used is comprised of third and fourth grade students that are classified but are in a general education classrooms and receive in-class support from the resource teacher. The control group consists of children who are third and fourth grade students that are classified and receive instruction in a self-contained special education classroom. Another limitation to this study will be the size of the sample group. In this district there are only a small number of children receiving in-class support.

Definitions of terms:

- inclusion* - is used to represent the education of all students receiving education in regular classrooms
- mainstreaming* - the process of placing a self-contained special education student in a regular classroom for certain academic subjects.

- Regular Education Initiative* - A proposal by Madeline Will to restructure the educational system
- In-Class Support*- Refers to a student that has been classified by the child study team due to a severe discrepancy between their achievement and performance levels and receives instruction in the regular education classroom with support from the resource room teacher who comes into the classroom once a day to give supplemental help in certain academic areas
- Perceptually Impaired (PI)* - Classification used in the New Jersey Administrative Code, Title 6 Chapter 28, Special Education, meaning a specific learning disability manifested by a severe discrepancy between the pupil's current achievement and intellectual ability in one or more of the following areas:
- (1) basic reading skills;
 - (2) reading comprehension;
 - (3) oral expression;
 - (4) listening comprehension;
 - (5) mathematics computation;
 - (6) mathematics reasoning and
 - (7) written expression

Chapter 2

Introduction

This chapter will review literature that supports or negates this researcher's hypothesis that students who are classified and receive instruction in a regular class have higher self-concept levels and academic achievement levels than students who are classified and receive instruction in a self-contained class.

Achievement Levels

In 1986, Madeline Will wrote a proposal for restructuring the educational system. This proposal was the result of recommendations made by an Office of Special Education and Rehabilitation Services (OSERS) task force comprised of parents and professionals. This task force was formed because they (OSERS) felt there was a need to improve the education of students who have learning problems. The recommendations were based not entirely on exhaustive research but also on the studied thoughts of the task force members (Will, 1986).

The proposal suggested that students with learning disabilities be educated in the regular classroom. In order to make this successful, some restructuring of the educational system was recommended.

The recommendations were as follows:

- 1.) Increased instructional time
- 2.) Provide a support system for general education teachers
- 3.) Give principals the power to control all programs and resources at the building level.
- 4.) Provide new instructional approaches

Since Will's proposal in 1986, many studies and many schools have researched the effects and overall outcome of this kind of educational system. Two topics that are most researched from this proposal are the student's academic achievement levels and their self-concept levels.

One such study (Schulte, Osborne & McKinney, 1990), collected pretest and posttest achievement test data on 67 students with learning disabilities who received instruction in one of four environments: one period of resource room instruction per day; two periods of resource room instruction per day; consultative services combined with in-class instruction; and consultative services to classroom teachers.

The selection of schools was chosen randomly from 48 elementary schools serving a large, heterogeneous school district that serves more than 60,000 students in Kindergarten through 12th grade. Out of this selection, 11 elementary schools plus replacements were chosen. In this district, there were rural, small-town, suburban and urban schools. The schools chosen for this project represented each of these areas.

The subjects included learning disabled (LD) students in first through fourth grades. The following were criteria to be eligible for participation: if they (a) were receiving learning disabilities resource room services, (b) score in

at least the average range of intelligence in the testing used to qualify for school-based services ($IQ > 85$), and (c) evidenced at least a one standard deviation discrepancy between IQ and achievement in the area of reading or written language using a regression-based formula (Schulte et al., 1990).

The results of this study provided support for the two models of consultative service delivery. The students that received instruction through the consultative/direct model made greater overall academic gains than the students who received instruction in a resource room program for one period per day. When achievement was examined separately for reading, written language and math, these gains were not evident. Students in the consultative/indirect model made achievement gains comparable to those of students in the resource room (Schulte et al., 1990). There were no significant differences found between treatment groups in the criterion-referenced reading measure. This was consistent with the results of the univariate analysis of the norm-referenced reading test scores.

The general education teachers that participated in either of the consultative models viewed both the consulting teacher and the consulting process positively according to evaluation data collected from the study.

Another popular type of study done in this area (inclusion) is a survey or interview. Two studies of this type (Giangreco, Dennis, Cloninger, Edelman & Schattman, 1993; Semmel, Abernathy, Butera & Lesar, 1991) surveyed teachers and their perceptions of educating students with learning disabilities in general education classes.

The first study (Semmel et al., 1991) surveyed 381 special and regular educators on their perceptions and opinions surrounding the Regular Education Initiative (REI). It surveyed such issues as preferred placement of students with

mild disabilities, teachers' responsibility and ownership, teacher preparedness for meeting the needs of these students, achievement outcomes for all children, and the changes that would result adopting the proposed consultant model rather than a pullout program. The results of this survey showed that a majority of the educators negatively support REI. A high percentage of those who responded felt that instructional classroom time would be negatively effected by the full-time placement of students with mild disabilities in the regular classroom. The teachers also felt that the rate at which curriculum needs were to be met would be slowed down by full-time placement of learning disabled students in regular classrooms. The survey also indicated that many educators did not foresee improvement in the achievement levels of special or regular education students as a result of REI reforms.

The second study (Giangreco et al., 1993) involved interviews of 19 general education teachers, Kindergarten through 9th grade. The interview addressed the experiences of general education teachers who have had a student with disabilities in their class. The results of this study showed that most of the teachers reacted to the initial placement in a cautious or negative manner. However, the final interview showed that 17 of the 19 teachers described transforming experiences of a more positive nature and related many benefits to the students with disabilities , their classmates and the teachers themselves.

A metanalysis was conducted by Tateyama-Sniezek (1990) to evaluate cooperative learning as a technique to promote the academic competence of handicapped students. Journal articles that included students with handicaps in the sample (achievement as a dependent variable and cooperative learning as an independent variable) were selected for inclusion. Twelve studies met the selection criteria.

The results of this analysis proved to be inconclusive. Several factors made it difficult to make definitive conclusions about the effects of cooperative learning on the achievement of students with handicaps: a) the equivocal results, b) the specific operational definitions of cooperative learning, and c) the conditions to which cooperative learning were compared (Tateyama-Sniezek, 1990).

Tateyama-Sniezek (1990) states that the effectiveness of cooperative learning methods on the school achievement of handicapped students is in fact a goal secondary to improving the interaction and relationships between mainstreamed and nonhandicapped students. However, for all mildly handicapped students, gains in academic achievement is a priority in their education. Before teachers should be encouraged to use cooperative learning as a strategy to promote academic achievement of handicapped students, further investigation is required; the variables that contribute to its "risks and benefits" must be identified.

More students with disabilities are spending time in regular classrooms. This trend is seen by some as a good thing if students get support. In an annual report on special education programs from the Education Department, Schnaiberg (1994) reports that students with disabilities are spending more of their time in regular classrooms than in any other school setting. It was reported that, during the 1991-1992 school year, about 35.7% of the nation's more than five million students with disabilities were served in regular classes during at least 80% of their school day (Schnaiberg, 1994). The next most common placement was the resource room with 34.4% , followed by separate classes at 23.9%. These placements included students ages 3 through 21 years. Hehir (as cited in Schnaiberg, 1994) the director of the office of special education

programs, states "This [trend] is generally a good thing if those kids and their teachers are getting the type of support that they need."

In a longitudinal study that was also included in the department report, there are many disabled high school students that are struggling in a regular education setting. Students in the study who spent most of their time in regular classrooms were more likely to fail courses than students taught in more specialized settings (Schnaiberg, 1994). For example, a ninth grader who was in regular academic classes most of the time was 10 percent more likely to fail one of his/her classes than a peer who spent only half the time in the same setting. According to the report, the difference is more prominent early in high school, possibly because more students drop out or take more vocational courses after ninth grade.

Another reason the report cites for possible failure is the higher student-to-teacher ratios in the regular education high school classes. The average academic class in high school with disabled students had one teacher for 33 students, while the average special education class had one teacher and aide for nine students.

Federal officials said the course placement of students with disabilities becomes more important as the debate over educating them moves away from merely providing access to the mandated "free and appropriate" public education to the bigger task of ensuring they succeed in the classroom (Schnalberg, 1994).

Self-Concept

When the word inclusion is mentioned, people often think of students with behavioral problems being placed back into a regular education setting and causing disruption. It is perceived that these students will slow the

academic pace of the classroom down because the teacher will have to constantly attend to their behavioral problems. Students with learning disabilities can display negative emotional or behavioral characteristics but often because of their academic frustrations. In a study done by Meadows, Neel, Scott and Parker (1994), they examined (a) the academic performance and social competence of mainstreamed and nonmainstreamed students with serious behavioral disorders, and (b) the accommodations made in general education classroom environments for mainstreamed students with behavioral disorders. The participants in this study included 19 sixth, seventh, and eighth grade male students with identified behavioral problems and placed in self-contained classrooms. The students were divided into two groups: those who were mainstreamed part of the day in content area classes such as math, reading, etc., and those who remained in self-contained special education classes for all content area subjects. Of the 19 participants, 13 were mainstreamed for at least one hour a day, and 6 were mainstreamed and taught exclusively in a special education classroom. Also included in the study were 3 special education teachers from the self-contained classrooms and 13 regular education teachers.

There were two types of instruments used to evaluate the participants in this study: The Child Behavior Checklist - Teacher Report Form (TRF) and Achenbach Youth Self-Report. They were chosen because these tests provide specific information on problem behaviors, academic history, ratings of academic performance, and overall functioning. Also, reliability data and correlations with other behavior checklists are excellent.

The results indicated that, overall, the mainstreamed students had higher reading and written language scores, better work habits, and higher grade point

averages. It was reported by their teachers that these students were more attentive in the regular class, worked harder, and were better adjusted. The majority of the teachers in the general education classrooms used the same curricula with all students and used the same criteria to evaluate all students. There were minimal modifications made for the students with serious behavioral disorders by the teachers participating in this study. Placements in general education settings represented a major reduction, if not complete cessation, of differential programming.

Meadows et al. (1994) suggest more research is needed on the specific characteristics of children with serious behavior disorders in mainstreamed and nonmainstreamed settings. They also suggest a better understanding of the individual characteristics of children who are successful in the various settings as well as the differences among those settings.

In a recent debate over the pros and cons of inclusion, McLeskey and Pugach (1995) argue that an article by Roberts and Mather (1995) was based on a series of "ill-conceived and poorly supported arguments in an attempt to build a case against inclusion for students with learning disabilities (LD)." In their article, Roberts and Mather (1995), make reference to the fact that general education will make *minor* changes with the advent of inclusion. In a rebuttal to this, McLeskey and Pugach (1995) state that, in the 1990's, school reform has already presented many schools with the opportunity to make major changes to help students at the margins of the system. By educators, both general and special, working collaboratively, they have the potential to reinvent education for all students. They (McLeskey & Pugach, 1995) state that it is high time that the dialogue in the special education literature changed from an emphasis on why inclusion cannot work, to focusing on methods to make classrooms and schools

more accommodating places for all students, including those with learning disabilities.

In a rebuttal to the McLeskey and Pugach (1995) argument, Roberts and Mather (1995) state that they did not assert that inclusion is only a *minor* intervention or that special education is a place rather than a service. They state that they hope new school reform movements will allow LD students to be served entirely within general education settings, but they do not believe such settings will ultimately prove to be optional for all students with severe learning disabilities. They (Roberts & Mather, 1995) cite research evidence that not only supports the effectiveness of special education settings, but also highlights the limitations of inclusion settings. As other researchers have pointed out, they (Roberts & Mather, 1995) agree that a good general education is very different from a special education. Although some LD students may succeed in an inclusion setting, the argument in favor of the elimination of the continuum of services for all students with LD, as advanced by McLeskey and Pugach, does not appear to be sound or justifiable (Roberts & Mather, 1995).

In the area of self-concept, two studies (Guterman, 1995; York, Vandercook, MacDonald, Heise-Neff & Caughey, 1992), completed surveys that focused on the students' point of view regarding placement in regular education classrooms. The first study (Guterman, 1995) had a sample population of 9 high school students who were receiving learning disabilities services. The survey investigated peer acceptance, perceptions of self, and perceived efficacy of learning disabilities programs. The results indicated that most classified students have had a negative experience in self-contained classes but, despite this, they would not want to be in a regular class.

The other study (York et al., 1992) had a sample population of 2,700

middle school students in grades six through nine. In that population, 42 of those students were students with handicaps. Seven were labeled moderately mentally retarded. Five were labeled severely or profoundly mentally retarded. Some also had motoric, vision, and hearing difficulties, in addition to mental retardation. A survey was taken of general educators, special educators and classmates of students with severe disabilities that were integrated into general education classes in two suburban midwestern communities. The results of the survey indicated that from all three sides, integration was positive for both the students and the teachers.

Students with learning disabilities often have low self-concept levels as a result of their academic frustrations. This inhibits their socialization skills and can make them outcasts. A comparison study was completed by Roberts, Pratt and Leach (1991) between classroom and playground behaviors of students with disabilities. These behaviors are frequently the reasons cited for rejection of these students by their regular-class peers. The study compared the classroom and playground behaviors of 95 mildly disabled students with that of 95 students without disabilities. The ages of the participants were 8-13 years and they all attended public elementary schools. Behaviors were observed using a time-sampling method with nine categories of behaviors.

The results of this comparison showed that there were many similarities in behavior patterns between the two groups. Both groups showed low levels of negative, disruptive, and aggressive behavior in the classroom and playground settings (Roberts et al., 1991). There was no significant difference between the two groups in their interaction with adults or peers in the classroom. There were differences, however, between the groups in the type of behavior engaged in, both in the classroom and on the playground. The students with disabilities

interacted and played less with their peers on the playground than did the other students. Although the results showed that the students with disabilities were not totally isolated, this finding has implications for social acceptance of these students in an integrated setting. When the students with disabilities were not interacting with their peers, they were observed engaging in more solitary play and more positive interactions with adults.

The results of this study suggest that students with disabilities interact less with peers and more with adults than did the students without disabilities. These results support Gottlieb's (1981, pg. 223) suggestion that "it is not sufficient to provide contact between students with and without disabilities to build intergroup social interaction. If intergroup social interaction is to be an aim of integration programs, opportunities for interaction should be carefully planned and all influential factors investigated, such as the roles of teachers and regular-class peers."

Meadows et al. (1994) examined the academic performance and social competence of mainstreamed and non-mainstreamed students with serious behavioral disorders. The Walker-McConnell Adolescent Scale of Social Competence and School Adjustment was used to evaluate the participants' social competence levels. This scale was chosen because of its broad applicability in identifying social competence deficits among students with serious behavioral disorders and at-risk school populations. The scale was designed to be used by teachers who have observed a student's social skills and competencies for at least 2 months.

The results showed that students who remained in self-contained classrooms demonstrated more extremes in social behavior. The students with serious behavioral disorders that were non-mainstreamed were reported to be

more aggressive and unable to demonstrate self-control, or they were introverted and withdrawn.

Summary

The topic of inclusion continues to be a controversial topic as evidenced by the research that's been available on this subject since Madeline Will's proposal in 1986. In the area of achievement, one study (Schulte et. al., 1990), received positive results for the consultative model. Another study (Schmalberg,1994), supported the inclusion model. A third study (Giangreco et.al.1993), received positive results using the mainstreaming model. On a negative side, one study (Semmel et. al. 1991) received negative results supporting the Regular Education Initiative. Finally, in the area of academic achievement, one study (Tateyama-Sniezek,1990) proved inconclusive.

In the area of self-concept, three studies (Meadows et. al. 1994; York et. al., 1992; Guterman, 1995) supported or received positive results for including disabled students in regular classes. They all reported positive self-concept levels, less aggressive behavior and positive peer reactions.

Although many studies have been completed on academic achievement levels of disabled students in regular classes, and also on their self-concept levels, none have compared both of these areas in the same study. This study will compare both academic achievement and self-concept levels of students who are classified and receive educational instruction in a regular class with in-class support to those students who are classified and receive educational instruction in a self-contained special education classroom.

Chapter 3

Method

This comparison study will attempt to prove that students who are classified and receive instruction in a regular education class with in-class support, achieve at higher levels and have higher self-concept levels than students who are classified and receive instruction in a self-contained special education class.

Participants

The participants in this study are third and fourth grade students who have been classified perceptually impaired (P.I.) by a child study team. There are twelve participants in this study. They were selected according to their grade and classification. Of the total number of participants, there are 8 males and 4 females ranging in age from 8 years 7 months to 10 years, 3 months, with a mean age of 9 years, 2 months. The participants are from an upper middle class suburban district in southern New Jersey. The district houses two elementary schools, one middle school and one high school. It is a preschool through 12th grade district with an enrollment of 2,304 students. The basis for participation is voluntary. The place of employment of this researcher is in one of the district's elementary schools.

In order to get participation for this study, a letter was sent home to the

parents/guardians of the students who are classified P.I. in the 3rd/4th grade self-contained P.I. class and to the students who are classified P.I. in the regular 3rd and 4th grade but receive in-class support (see Appendix A for a copy of the permission letter). Of the 16 P.I. students in the self-contained class, seven returned the permission slip giving permission to complete pre-and posttesting for this study. The other six students did not respond. Of the 9 P.I. students who receive in-class support in the regular 3rd and 4th grades, five returned the permission slips giving permission to complete pre-and posttesting. Four denied permission because they felt their son/daughter had been through enough testing with the Child Study Team and felt it would do damage to their self-concepts if they went through a testing situation again.

Procedure

The study was conducted within this researcher's district's two elementary schools. Pretesting was completed in early October of 1995. Posttesting was completed in March of 1996. The self-contained special education class and the regular education third grade class are in one elementary school and are located next to each other. The regular education fourth grade class is in the other elementary school. Each participant was pulled out of their class individually and taken with the examiner to a testing room.

Materials

The materials used for the achievement part of the testing were selected portions of the Woodcock Johnson Psycho Educational Battery. The reading and math subtests were administered to each participant to determine academic achievement levels in reading and math. The Piers-Harris Self-Concept Inventory was also administered to determine a self-concept level for

each participant. Testing adhered to the standardization procedures for each instrument.

Summary

This is a comparison study of twelve 3rd and 4th grade, classified students; five receive educational instruction in a regular class with in-class support, and seven receive educational instruction in a self-contained special education class.

The testable hypothesis is that the students who receive instruction in a regular class will demonstrate higher academic and self-concept levels when compared to their peers in the self-contained class. Students will be assessed in October, 1995 and again in March 1996.

Skills will be measured using two separate instruments. Standardized scores in reading and math will be derived from the Woodcock-Johnson Psycho Educational Battery. Standardized scores are compared using a statistical mean Standard Score of 100 with a Standard Deviation ± 15 .

Self-concept levels will be derived from the Piers Harris self-concept Inventory. Raw scores will be used as the means of comparison for the two groups.

Results will be interpreted in two ways: a between group comparison and a within group comparison. A between group comparison will compare the pre-test and post-test results of the included students to the self-contained students using 2-tailed t-tests. A within group comparison will compare the pre-test and post-test results within each group using paired t-tests.

Chapter 4

This study was completed in an attempt to prove that students who are classified and receive academic instruction in a regular class with support will have higher academic achievement and self-concept levels than students who are classified and receive academic instruction in a self-contained special education classroom.

A Comparison of Achievement

A comparison of the results between a pre-test administered in October, 1995 and a post-test administered in March, 1996 was used to determine the validity of the original hypothesis. This hypothesis stated that students who were classified P.I. and received instruction in a regular class with in-class support will have higher academic achievement levels than students who were classified P.I. and received instruction in a self-contained special education classroom.

Achievement levels were measured by administering the Reading and Math subtests of the Woodcock-Johnson Psycho-Educational Battery-Revised. The test provided standard scores in each of these areas. The reading subtest included: letter-word identification, passage comprehension, word attack, and reading vocabulary. The math subtest included: calculation, applied problems and quantitative concepts.

Comparisons were completed on two levels. The first comparison was a between group comparison (included vs. self-contained students), using 2-tailed t-tests for independent means. With the pretest, in the area of reading, the included students attained a mean score of 100.4 (SD=3.8) and the self-contained students received a mean score of 87.8 (SD=5.7). The difference between groups was significant, $t(8) = 4.97, p < .01$. With the pre-test, in the area of math, the included students attained a mean score of 94.8 (SD=18.7) and the self-contained students received a mean score of 89.8 (SD=21.9). The difference between groups was not significant.

When post-test results were compared, the included students attained a mean score of 101.8 (SD=8.9) in reading and a mean score of 104.6 (SD=11.1) in math. The self-contained students attained a mean score of 90.4 (SD=9.8) in reading and a mean score of 103.4 (SD=20.2) in math. When the means were compared using a 2-tailed t-test for independent means, a significant difference was found in the area of reading, $t(8) = 1.92, p < .10$. In terms of math, the means did not significantly differ. See Table 1 for student results given in terms of standard scores for each academic area.

The second level of comparison was more homogeneous. A within group comparison was done for each group comparing the results of each of their pre-test and post-test scores. Students included in regular classrooms had a pre-test mean in reading of 100.4 (SD=3.8) and a pre-test mean in math of 94.6 (SD=18.7). post-test means in reading were 101.8 (SD=8.9) and in math were 104.6 (SD=11.08), respectively. The difference between these means when compared (using a paired t-test), were not significant. However, the difference in math scores were approaching significance, $t(4) = 2.01, p < .12$.

Students in the self-contained classroom had a pre-test mean in reading

of 87.8 (SD= 5.7) and a pre-test mean in math of 89.8 (SD=21.9). Post-test means in reading were 90.4 (SD=9.8) and post-test means in math were 103.4 (SD=20.2) The difference between these means were not significant. However, the difference in math scores were significant, $t(4) = 6.05, p < .01$.

Table 1

Results of Academic Achievement In Terms Of Standard Scores
($\bar{x}=100, SD=15$ as norm)

	<u>Group</u>	<u>Mean</u>	<u>Std. Deviation</u>
*Pretest Reading	Incl.	100.4	3.8
	Self	87.8	5.7
Pretest Math	Incl.	94.6	18.7
	Self	89.8	21.9
**Posttest Reading	Incl.	101.8	8.9
	Self	90.4	9.8
Posttest Math	Incl.	104.6	11.1
	Self	103.4	20.2

Note: *Difference between groups is significant at the .01 level.

**Difference between groups is significant at the .10 level.

A Comparison of Self-Concept

Along with higher achievement levels, the hypothesis of this study also

predicted that self-concept levels of students who were classified P.I. and received instruction in a regular class with in-class support would be higher than those students who were classified P.I. and received instruction in a self-contained special education classroom.

Self- concept levels were measured by administering certain randomly picked questions of the Piers Harris Self -Concept Inventory. The results of this inventory were measured by raw scores.

Comparisons were again measured on two levels, a between group comparison and a within group comparison. The questions were compared on two different levels: those that were academic related (e.g., I get worried when we have tests in school) vs. those that were general self-concept related (e.g., I am a happy person); and those that were answered positively vs. those that were answered negatively.

A between group comparison indicated that with the pre-test, in the area of academic/positive, academic/negative, general/positive, and general/negative, no significant difference was found between these groups.

When post-test results were compared between the same groups, again no significant differences were found.

A within group comparison was completed for the included and self-contained students in the areas of academic/positive, academic/negative, general/positive, and general/negative. There were no significant differences to report for either of these groups. See Table 2 for self-concept results given in terms of means and standard deviations.

Table 2
Results Of Self-Concept In Terms Of Mean Raw Scores And
Standard Deviations

	Group	Mean	Std. Deviation
Acad. SelfConc Pre Pos	Incl.	6.60	.89
	Self	5.40	1.82
Acad. SelfConc Pst Pos	Incl.	6.20	1.30
	Self	5.20	.84
Acad. SelfConc Pre Neg	Incl.	.40	.89
	Self	1.60	1.82
Acad. SelfConc Pst Neg	Incl.	.80	1.30
	Self	1.80	.84
Gen. SelfConc Pre Pos	Incl.	22.60	1.34
	Self	18.80	4.82
Gen SelfConc Pre Neg	Incl.	2.40	1.34
	Self	6.20	4.82
Gen SelfConc Pst Pos	Incl	22.00	1.73
	Self	18.20	4.44
Gen SelfConc Pst Neg	Incl.	3.00	1.73
	Self	6.80	4.44

*Academically related questions are indicated in Appendix B by a "".

Summary

With taking together the scores from the t-tests, these results suggest that the hypotheses were not met.

CHAPTER 5

Summary of Study:

The original hypothesis of this study stated that students who are classified P.I. and receive academic instruction in a regular class with in-class support will have higher academic achievement levels and higher self-concept levels than students who are classified P.I. and receive academic instruction in a self-contained special education classroom.

The results of this study did not meet the original hypothesis statements. There were only two areas in which a significant difference was found and that was in the between group comparison in reading in both pre-testing and post-testing. The rest of the comparisons were not significant.

Discussion:

When comparing the scores between the included students and self-contained students, they did not vary significantly. The only area in which there was a noticeable difference was reading. This could be because the included students were academically stronger in reading to begin with and maintained that strength throughout the school year. Perhaps this was the reason they were chosen to be in a regular class with in-class support. Reading is the backbone of all academics, and if these students could maintain high enough reading levels with some support, then it would only make sense to keep them with their peers in an educational setting.

When comparing self-concept levels of the included and self-contained students, there were no significant differences in these areas either. This is not necessarily a bad thing. This proves that even though students are in self-contained classrooms away from most of their age appropriate peers, their self-concept levels did not differ from those students who were included in classrooms with their age appropriate peers. That is, they did not view themselves as being different from their peers.

Limitations:

There are several limitations to this study which may be indicators to why the hypotheses were not upheld. First, the sample size of this study was very small. There were only twelve participants. The larger the sample size, the more valid the study. Second, the amount of time between pretesting and posttesting was only 5 months. This could explain why no significant differences were found. Finally, the self-contained group included students who were not new placements and had already adapted; or were never exposed earlier to failure in a regular education classroom. This could be the reason for no significant difference between groups in their self-concept levels.

Recommendations:

The following are recommendations that would help to make this study more valid. First, have a larger sample size. A larger sample size always increases the validity of a study. Because of the small sample size, there was not an equal distribution among the participants for a good comparison. For example, in the self-contained sample, there were 7 students. Of the 7 students, 3 were considered fourth grade level and 4 were considered third grade level. The included sample contained 5 students. Of the 5 students, 2 were in a regular third grade class and 3 students were in a regular fourth grade class. If

the sample size was larger, the distribution among participants may have been more equal for a better comparison.

Another recommendation would be to have a longer duration of time between pre-testing and post-testing. This would allow for a good solid reading of the participants' achievement levels and self-concept levels to see whether or not they made significant gains throughout the school year. The longer the duration between pretesting and posttesting, the better the the comparison.

When choosing the participants for the study, try not to use students who have only been in self-contained classrooms throughout their schooling years. This does not allow for a good comparison among their self-concept levels because their peer relations and academic instruction have always been within the self-contained classroom.

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Appendix A

Dear Parent/Guardian,

I would like to ask your permission to allow me to administer and individual achievement test in the areas of reading and math to your son/daughter. The administration of this test will help fulfill requirements for my graduate work. I will need to perform this test in October and again in March. Your son/daughter will also be asked to answer some questions on a self-concept rating scale regarding their self-concept.

All information will be kept confidential! Once the tests have been collected, your son/daughter's name will be removed and replaced with a number so that he/she can no longer be connected to any specific answers.

I would appreciate it if you would return the form on the back of this page whether or not you would like your son/daughter to participate, so that we know that this information has reached you. If you have any questions, please feel free to contact Mr. Jack Haag at New Albany School, Mr. Gene Porco at Rush School or myself at Rush School at ext. 555.

Thank you for your prompt response.

Sincerely,

Tracy Semptimphelter
P.I. Teacher Rush School
Learning Consultant Intern

Appendix B

Please check the appropriate line and send this form back to school with your son/daughter by Tuesday October 3rd:

I have read and I understand the permission letter. I give consent for Ms. Semptimphelter to administer the individual achievement test and the self-concept inventory to my son/daughter.

I do not wish to have my son/daughter be given the individual achievement test or the self-concept inventory.

Parent Signature/Date _____

Child's Name _____

Appendix C

**Questions Asked from The Piers-Harris Children's Self-Concept
Scale**

- | | |
|--|--------|
| 1. My classmates make fun of me | yes no |
| 2. I am a happy person | yes no |
| 3. It is hard for me to make friends | yes no |
| 4. I am often sad | yes no |
| *5. I am smart | yes no |
| 6. I am shy | yes no |
| *7. I get nervous when the teacher calls on me | yes no |
| 8. My looks bother me | yes no |
| 9. When I grow up, I will be an important person | yes no |
| *10. I get worried when we have tests in school | yes no |
| 11. I am unpopular | yes no |
| *12. I am well behaved in school | yes no |
| 13. It is usually my fault when something goes wrong | yes no |
| 14. I cause trouble to my family | yes no |
| 15. I am strong | yes no |
| 16. I have good ideas | yes no |
| 17. I am an important member of my family | yes no |
| 18. I usually want my own way | yes no |
| 19. I am good at making things with my hands | yes no |
| 20. I give up easily | yes no |
| *21. I am good in my school work | yes no |
| 22. I do many bad things | yes no |