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The effectiveness of increased support by special education teachers on the academic achievement of learning disabled students in main subject area inclusionary classes at the secondary education level when compared to no in-class support

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THE EFFECTIVENESS OF INCREASED SUPPORT BY SPECIAL EDUCATION

TEACHERS ON THE ACADEMIC ACHIEVEMENT OF LEARNING DISABLED

STUDENTS IN MAIN SUBJECT AREA INCLUSIVIONARY CLASSES

AT THE SECONDARY EDUCATION LEVEL WHEN

COMPARED TO NO IN-CLASS SUPPORT

By
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ABSTRACT

Kelly A. Fitzhenry
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Teachers on the Academic Achievement of Learning Disabled
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Dr. Stanley Urban
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The purpose of this study was to determine the effectiveness of increased support by special education teachers on the academic achievement of learning disabled students in main subject area inclusionary classes at the secondary level when compared to no in class support. This information can help analyze the effectiveness of an inclusion program, validate successful inclusive educational policies that should be continued, and pinpoint the need for revision. Grade point average data of included learning disabled students in Core English II, Core B Math, and Introduction to Earth Science during the 94-95 academic year when no in class support was provided was collected and compared this data to a comparable group of individuals' grade point averages in the same course of study during the 98-99 academic school year when support was provided. The subjects for this study attended or are presently attending Rancocas Regional High School in Mount Holly, New Jersey. The data reveals that there are no significant differences between academic achievement of special education students receiving in class support as compared with special education students that did not receive in class support.

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BACKGROUND

In 1975, PL 94-142 the Education for All Handicapped Children Act (EACHA) was enacted to guarantee that an educational program is provided for all children with disabilities. Amendments to the EAHCA enacted in 1990, PL101-476 changed the name to Individuals with Disabilities Education Act (IDEA). Subsequent amendments have clarified and strengthened the law. It is considered civil rights legislation that guarantees education to individuals with disabilities. The IDEA mandates that a free appropriate education be provided to all students with disabilities, regardless of the nature or severity of their disability.

The federal special education law, IDEA, contains two major provisions related to placement for special education services. These provisions are: (1) the continuum of alternative placements and (2) the least restrictive environment. The placement of students with disabilities in general education classes is considered the least restrictive environment. It is important that placement in regular classes be done in a responsible manner. One way of providing support for student with disabilities is to place them in an inclusionary setting where there are two full time teachers consisting of one special education teacher and a regular education / core curriculum teacher. A coteaching environment is established with the special education teacher providing modifications for classified students based on IEP documentation.

NEED FOR STUDY

Research on the effectiveness of inclusion is inconclusive and offers a variety of perspectives. Some studies suggest that inclusion often results in positive academic and social outcomes for students with disabilities, while other studies indicate that some students with disabilities do not receive the instructional modifications they need to benefit from inclusion. For an example, in an extensive study of full inclusion (Salend, 2001), found teachers did not individualize instruction or plan for children in their class. Other studies have shown that general and special educators have mixed reactions to inclusion. Educators tend to agree with the principle of placing students with disabilities in general education classrooms, although some controversy still exists. While some teachers and administrators support inclusion (Salend, 2001), others are satisfied with a pullout system for delivering special education services and believe that full-time inclusion of students with mild disabilities would not be academically or socially beneficial (Salend, 2001). Cooperation of educators is critical to the success of inclusion (Salend, 2001). Their attitudes are related to their efficiency in implementing inclusion. This implementation depends on the administrative support, resources, time, and training they receive to put into place effective inclusion programs. The attitudes and reaction of families of children with and without disabilities to inclusion also appear to vary. The IDEA mandates that a free and appropriate education be provided to all students with disabilities. It is necessary that educational practices be held accountable. Implementation of inclusion must be an appropriate placement, resulting in positive outcomes for students with disabilities.

VALUE OF STUDY

Students, teachers, and family members have varied perceptions of inclusion that are often related to the effectiveness of the inclusion program; therefore, any evaluation of an inclusion program must include an examination of the perceptions and experiences of stakeholders. This information can help analyze the effectiveness of an inclusion program, validate successful inclusive educational policies that should be continued, and pinpoint the need for revision. Academic performance of students is one factor that can be measured to help evaluate the effectiveness of an inclusion program.

RESEARCH QUESTIONS

To accomplish the general purposes of this study, the data obtained is used to address the following general research question: What is the effect on academic achievement of increased support by a special education teacher in an inclusion class at the secondary education level in main subject areas for learning disabled students when compared to no in-class support? The data obtained will also be used to answer the following specific questions:

- **Question One:** Is there a significant difference in GPA obtained by included students in Core II English during the 94-95 academic year when no in class support was provided when compared to a group of individuals placed in Core II English during 98-99 when in class support was provided.

- **Question Two:** Is there a significant difference in GPA obtained by included students in Core Math B during the 94-95 academic year when no in class support

was provided when compared to a group of individuals placed in Core Math B during 98-99 when in class support was provided.

- **Question Three:** Is there a significant difference in GPA obtained by included students in Introduction to Earth Science during the 94-95 academic year when no in class support was provided when compared to a group of individuals placed in Introduction to Earth Science during 98-99 when in class support was provided.

DEFINITIONS

Terms used in this study that required definitions are as follows:

1. Mainstreaming – Generally, mainstreaming has been used to refer to the selective placement of special education students in one or more "regular" education classes. Proponents of mainstreaming generally assume that a student must "earn" his or her opportunity to be placed in regular classes by demonstrating an ability to keep up with the work assigned by the regular classroom teacher. This concept is closely linked to traditional forms of special education (Phi Delta Kappa, Research Bulletin, Nov. 1993).

2. Least Restrictive Environment - The LRE is a provision that appears in the federal special education law and states that insofar as possible that placement with students who do not have disabilities less restrictive than a placement that contains students without disabilities (IDEA).

3. Inclusion – Inclusion is a term, which expresses commitment to educate each child, to the maximum extent appropriate, in the school and classroom he or she would

otherwise attend. It involves bringing the support services to the child, rather than moving the child to the services, and requires only that the child will benefit from being in the class, rather than having to keep up with the other students. Proponents of inclusion generally favor newer forms of education service delivery (Phi Delta Kappa, Research Bulletin, Nov.1993)

4. Full Inclusion – Full inclusion means that all students, regardless of handicapping condition or severity, will be in a regular classroom/program full time. All services must be taken to the child in that setting (Phi Delta Kappa, Research Bulletin, Nov. 1993).

5. Secondary Education – Ninth through twelfth grade

6. Coteaching – Coteaching is an approach in which the content-area teacher and the special education teacher instruct students jointly in an educationally integrated setting. Both teachers instruct and provide supportive services. This model capitalizes on the specific and unique skills each professional brings to the classroom (Friend & Cook, 1996).

7. Learning Disability – Learning disability or "specific" learning disability corresponds to perceptually impaired and means a disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. It is characterized by a severe discrepancy between the student's current achievement and intellectual ability in one or more of the following areas: basic reading skills, reading comprehension, oral expression, listening comprehension, mathematical computation, mathematical

reasoning, and written expression. The term does not apply to students who have learning problems that are primarily the result of visual, hearing, or motor disabilities, general cognitive deficits, emotional disturbance or environmental, cultural or economic disadvantage (N.J.A.C. 6A: 14-3.5©11)

LIMITATIONS

The following limitations should be taken into account when generalizing the results of this study. The collection of data is representative of special education students who have attended or who are presently attending Rancocas Valley Regional High School. The information collected will concentrate on the main subject areas of English, math, and history. There are several factors that contribute to the academic success of a student, unfortunately when researching past academic records of students it is not possible to obtain information on family involvement, cooperative student behavior or lack of it, attendance, and interpersonal relations between inclusionary teachers.

Students are educated in a block schedule at Rancocas Valley where there are fall and spring semesters. There may be a discrepancy between academic success from courses taken the first half of the year and courses taken the second half of the year.

During the academic year 94-95 at the site where this study was conducted, resource centers were available and thus more severely disabled learners tended not to be included; however, by 98-99 resource centers were drastically reduced by twenty sections and the majority of classified students were placed in inclusive courses. Therefore, samples may not be strictly comparable.

CHAPTER II

REVIEW OF THE LITERATURE

FACTORS CONTRIBUTING TO INCLUSION MOVEMENT

Inclusion is a philosophy for educating students with disabilities in general education settings. It brings students, families, educators and community members together to create schools, which are based on acceptance, belonging and community. In actuality, inclusion had its origin in mainstreaming and shares many of the same goals. Inclusion advocates felt mainstreaming was a halfhearted attempt at integrating children with disabilities into the least restrictive environment and the natural environment of the regular education classrooms. The number of school districts implementing inclusion for their students with disabilities has increased significantly in the past several years (Salend, 2001). Several factors have contributed to this educational movement. Normalization, deinstitutionalization, early intervention and early childhood programs have promoted inclusionary education. Technological advances, the Civil Rights movement and its resulting litigation, advocacy groups, disappropriate representation and societal changes have also facilitated the shift towards educational reform.

Inclusion is concordant with in the principles of normalization, which originated in Scandinavia and was later brought to the U.S. (Salend, 2001). Normalization seeks to provide social integration and experiences that parallel those of society to adults and children with disabilities. Not long ago individuals with disabilities were feared, ridiculed, abandoned or placed in institutions that isolated them from the general public. Because of the terrible conditions found in many institutions, small community-based independent living arrangements were developed for individuals with disabilities. Funding in the past and in the present remains a

key issue with deinstitutionalization (Salend, 2001). Few funds have been earmarked for services to support these arrangements, limiting the impact of the de-institutionalization movement.

The effectiveness of early intervention and early childhood program have promoted the placement of students with disabilities in general education. These programs have increased the physical, motor, cognitive, language, speech, socialization and self-help skills of many children from birth through the age of six. They have also reduced the likelihood that secondary disabilities will occur, empowered families to promote their child's development and decreased the probability that children with disabilities will be socially independent and institutionalized as adults. In a follow up study comparing adults who received early childhood services with adults who did not, Schweinhart and Weikart (Salend, 2001) found that those who received early childhood services made more money, attained a higher level of education and used fewer social services than those who did not.

Technological advances have changed the quality of life for many individuals, helping them gain access, independence and achievement. Assistive and instructional technology allows individuals with communication, physical learning and sensory disabilities to gain more control over their lives and environment, as well as greater access to society. Not only do individuals with disabilities benefit from these devices; all members of society experience their consequences.

The Technology-Related Assistance for Individuals with Disabilities Act (PL 103-218, Tech Act), which was passed in 1988, is designed to help states develop and enact programs to give high-quality technological-related assistance to individuals with disabilities and their families (Salend, 2001). The Tech Act delineates two aspects of assistive technology: devices and

service. As a result of the Tech Act, many state departments of education have established programs to link individuals with the devices they need.

During the 1960's families and professionals became vocal advocates for the educational rights of students with disabilities (Salend, 2001). Many early advocacy efforts were stimulated in part by the landmark civil rights decision Brown v. Board of Education, Topeka, Kansas. In this decision, the United States Supreme Court ruled that separate education was not equal education for African American students. The court recognized that separate educational programs interfered with educational opportunities and motivation of these students. As a result, their potential for long-term success was impeded. This ruling provided powerful impetus toward integrated education for African American students, and it set the stage for other advocacy groups to challenge commonly accepted practices that discriminated against other students because of disabilities or differences in language, gender or ethnicity.

Fueled by the momentum of the civil rights campaigns, advocacy groups of family members, professionals and individuals with disabilities banded together to seek civil rights and greater societal acceptance for individuals with disabilities. Advocacy groups lobbied; state and federal legislators brought lawsuits while protesting policies of exclusion and segregation.

As the institutionalization of individuals declined, the number of special schools for students with disabilities rose. However, educators eventually questioned the segregation of these students and the effectiveness of these programs, especially with students having mild disabilities. Again "separate but equal" was referred to when looking at the justification for self contained classes in comparison to inclusionary support services.

Dunn (1968) also raised concerns about the disproportionate representation of students from culturally and linguistically diverse backgrounds in special education classes that

segregated these students, and saw inclusive placements as a way to counter this segregation. As specified in the new reauthorization of the Individuals with Disabilities Education Act (IDEA), school districts and state departments of education must determine if the problems of over-representation and under-representation exist, as well as the nature of these problems (Salend, 2001). The challenge to reform our educational system means that schools, in order to meet higher learning standards, (Salend, 2001) must restructure their programs to help all students, including those with disabilities. This push for reform, along with the factors discussed, helped to shape several education laws designed primarily to include individuals with disabilities in the mainstream of society.

After many years of legislation and litigation Senator Harrison Williams of New Jersey introduced the Education of All Handicapped Children Act, P.L. 94-142, which was passed in 1975. The 1990 Individuals with Disabilities Education Act (IDEA 1990) amended and added several new features. This law, now updated and reauthorized in 1997 (IDEA,P.L. 105-17), was a legislative landmark in many ways. The law alters former education practices that led to exclusion, neglect, and substandard treatment of the various persons with disabilities. The critical features of the IDEA have implications for identifying, assessing, and serving students with learning disabilities. Although this legislation never uses the word inclusion, the IDEA stipulates that each public agency must ensure that the placement of every child with a handicapping condition be determined at least annually, be based on the child's individualized education program and be as close as possible to the child's home. In addition, this legislation provides for the following:

1. Alternative placements included under the law are to be made available to the extent necessary to implement the individualized education program for each handicapped child.

2. Unless a handicapped child's individualized education program requires some other arrangement; the child is educated in the school, which he or she would attend if not handicapped.

3. In selecting the least restrictive environment, consideration is given to any potential harmful effect on the child or on the quality of services, which he or she needs.

Congress had never before made such a wide scale attempt to educate so many learners with diverse needs (Salend, 2001).

Along with IDEA, Section 504 of the Rehabilitation Act (P.L. 93-112) passed in 1973, serves as a civil rights law for individuals with disabilities and forbids all institutions receiving United States Department of Education funds form discriminating against individuals with disabilities in education, employment, housing, and access to public programs and facilities. This legislation requires that a recipient of federal funds educate, or provide for the education of, each qualified handicapped person in its jurisdiction with persons who are not handicapped to the maximum extent appropriate to the needs of the handicapped person. Section 504 also requires a school system to place a handicapped child in the regular educational environment operated by the recipient, unless it can be demonstrated by the recipient that education in the regular environment with the use of supplementary aids and services cannot be achieved satisfactorily. Both these statutes appear to require that a significant effort be made to find an inclusive placement.

In 1990, Congress enacted P.L. 101-336, the Americans with Disabilities Act (ADA) to integrate individuals with disabilities into the social and economic mainstream of society. Under Title III of the ADA, schools must make these facilities accessible to students with disabilities.

RECENT LEGAL ACTION

There have been a number of legal decisions over the last few years that deal with inclusion. Summaries of these cases appear below. Please note that each court has a separate jurisdiction and that the decision may not apply to all locations. With this caveat in mind, these cases give a sense of the trends.

Greer vs. Rome City School District (11th Circuit Court, 1992)

In this case, the court decided in favor of parents who objected to the placement of their daughter in a self-contained special education classroom. Specifically, the court said:

> *"Before the school district may conclude that a handicapped child should be educated outside of the regular classroom it must consider whether supplemental aids and services would permit satisfactory education in the regular classroom."*

The district had considered only three options for the child: the regular education classroom with no supplementary aids and services; the regular classroom with some speech therapy only; the self-contained special education classroom. The district argued that the costs of providing services in the classroom would be too high. However, the court said that the district couldn't refuse to serve a child because of added cost. On the other hand, the court also said that a district couldn't be required to provide a child his/her own full-time teacher. As in many decisions of this type, no clear determination is made about when costs move from reasonable to excessive. The major message in this case is that all options must be considered before removing a child from the regular classroom (Schultz Stout, 1996).

<u>Sacramento City Unified School District v. Holland (9th Circuit Court, 1994)</u>

In this case, the circuit court upheld the decision of the lower court in finding for the Holland family. The parents in this case challenged the district's decision to place their daughter half-time in a special education classroom and half-time in a regular education classroom. The parents wanted their daughter in the regular classroom full-time. A number of issues were addressed in this decision. The court considered a 1989 case in Texas, (Daniel R.), which found that regular education placement, is appropriate if a disabled child can receive a satisfactory education, even if it is not the best academic setting for the child. Non-academic benefits must also be considered.

In upholding the lower court decision, the 9th Circuit Court established a four-part balancing test to determine whether a school district is complying with IDEA. The four factors were as follows:

1. The educational benefits of placing the child in a full-time regular education program;

2. The non-academic benefits of such a placement;

3. The effect the child would have on the teacher and other students in the regular classroom; and

4. The costs associated with this placement.

As a result of applying these factors, the court found in favor of including the child.

<u>Oberti v. Board of Education of the Borough of Clementon School District (3rd Circuit Court, 1993).</u>

In finding for the parents in Oberti, the court ruled in favor of a placement that was more inclusive than that provided by a self-contained placement.

Specifically, the court ruled that three factors must be considered:

1. The court should consider whether the district made reasonable efforts to accommodate the child in regular education. The school must *"consider the whole range of supplemental aids and services . . ."*

2. The court should compare the educational benefits the child would receive in regular education (with supplemental aids and services) contrasted with the benefits in a special education classroom.

3. The court should consider the effect the inclusion of the child with disabilities might have on the education of other children in the regular education classroom.

If, after considering these factors, the court determines that the child cannot be educated satisfactorily in a regular classroom, the court must consider whether the schools have included the child in school programs to the maximum extent appropriate (Scultz Stout, 1996)

<u>Poolaw v. Parker Unified School District (Federal District Court, Arizona, 1994)</u>

In this case, the court ruled in favor of the district's offer of a residential placement contrary to the wishes of the family that their child be educated in a regular education classroom. The court stated that the child's previous and current district placements had adequately explored the effectiveness of regular education placement with supplemental aids and services. In doing so, the district found that the benefits of regular education placement were minimal and that the

child's educational needs could be met appropriately only by the residential placement offered by the district.

There are other court decisions in favor of more restrictive placements, including a 1991 decision in the 8th Circuit Court of Appeals that approved a centralized program for a wheelchair bound student with spina bifida. In this instance, the court decided that school authorities did not have to modify the neighborhood school for wheelchairs when an accessible program was available elsewhere in the school district (Schultz Stout, 1996).

While decisions will probably continue to come down on all sides of the inclusion spectrum, we can be assured that courts will be very thorough in their consideration of all options for children. They will examine M-Team and IEP processes to ensure that appropriate placements are based on the individual needs of each child (Schultz Stout, 1996).

TRADITIONAL PULL-OUT MODEL AND CONCERNS

Despite years of intervention research, legislation, and mandated services, many students with disabilities continue to fall through the cracks of the public education system. Some of the most disheartening postschool outcomes occur among students with mild to moderate disabilities. These are students with whom it is generally assumed that teachers and specialists should be most effective. Theses students also represent more than 90% of those served in traditional, pullout special education programs (Brogdan R., & Taylor, S.L.,1989). As more student outcome data have become available, numerous areas of concern have been identified.

Clearly, the impact of a disability cannot be discounted. Although effects of a disability may be minimized over time, most disabilities are likely to have lasting effects on student performance regardless of the support students receive (Salend, 2001). The prognosis for

successful remediation of identified students' academic and social skills problems in traditional special education programs is not optimistic (Wagner et al., 1991). Less than 10% of all identified students, including those with mild disabilities, are ever declassified and return to general education on a full time basis (Brogdan R., & Taylor, S.L.,1989).

A disproportionate number of students with disabilities fail classes and drop out of school before graduating (Wagner et al., 1991). Overall, almost 40% of students with disabilities leave school, whereas less than 25% of the general education student population drops out (Brogdan R., & Taylor, S.L.,1989). Special education dropouts are also less likely than typical students to return to school to complete General Education Diploma (GED) requirements (Wagner et al., 1991). Students with disabilities reenter the education system at approximately half the rate of their peers (Salend, 2001).

Most special education students are poorly prepared for the future. Numerous studies have shown that students with disabilities fail to meet both teachers' and families' expectations despite years of extensive and expensive special education (Carlson 1997: Brogdan R., & Taylor, S.L.,1989; Wagner et al, 1993). Because these young adults have few relationships with peers, many must remain dependent on their families for social and emotional support. Young adults with mild disabilities remain at home long after their typical peers. This situation puts additional stress on many families because the parents and young adults had expected this to be a time of great independence (Carlson, 1997).

Many young adults are vocationally ill prepared. For example, Edgar and colleagues (1986) reported that only 18% of young adults with mild to moderate disabilities earn more than minimum wage. Few of these former students have the knowledge, skills and confidence needed to seek out post secondary education and use available community resources (Edgar & Polloway,

1994). Wagner and Blackorby (1996) reported similar post secondary education enrollment findings in the U.S. Department of Education-sponsored National Longitudinal Transition Study data. In comparison with their typical peers, few young adults with disabilities participated in post secondary education programs. Approximately one-third of the former special education students engaged in post secondary learning experiences compared with approximately two-thirds of the typical population.

More than half of all students with identified behavior disorders drop out of school and approximately 75% of these students are arrested within five years after leaving school (Wagner et al., 1991). Although these students with mild to moderate disabilities represent 10% of the school population, they are grossly overrepresented within the juvenile system. Studies and meta-analyses of incarcerated youth (Brogdan R., & Taylor, S.L.,1989) show that 12% to 70% have mild to moderate disabilities. Many experts speculate that the academic failure, social isolation, and dropout experiences of students with disabilities all contribute to their delinquent behavior (Brogdan R., & Taylor, S.L.,1989).

Student outcomes for participants in special education have been poor. Clearly, the program strategies that have been used in the past have not met many of the students' social and academic needs. These discouraging outcomes likely are due to a number of factors that work against students with disabilities and their teachers (Slavin et al./1989). It is unlikely that many students with disabilities, who have participated in segregated programs, have the in-depth content knowledge they need to perform successfully on exit tests that many states require to earn a standard high school diploma (Slavin, 1989), a minimal requirement for success in today's world. These concerns must be addressed for it is apparent that students with disabilities are not

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having their educational needs met by traditional methods. Inclusion may address some of these concerns.

INCLUSION COMPARED TO SEGREGATION

I have found no comprehensive or national data available on special education students' academic gains, graduation rates, and preparation for post-secondary schooling, work, or involvement in community living. An accurate comparison between separate programming and inclusive programming would be difficult through research evaluation. Therefore, there is a need for a study based on special education students' acedemic gains when placed in an inclusionary setting in comparison to a purely mainstreamed setting. The following is a brief review of a number of studies of various inclusive strategies.

There are a number of reviews and meta-analyses that consistently report little or no benefit for students when they are placed in special education settings (Salend, 2001). However, in 50 studies comparing the academic performance of mainstreamed and segregated students with mild handicapping conditions, the mean academic performance of the integrated group was in the 80th percentile, while the segregated students score was in the 50th percentile (Salend, 2001). However, all of these studies are ex post facto and lacked initial random assignment.

Using this evidence, inclusion proponents claim that segregated programs are detrimental to students and do not meet the original goals for special education. Recent meta-analyses confirm a small-to-moderate beneficial effect of inclusion education on the academic and social outcome of special needs students (Carlberg, C. and Kavale, K. 1980; Baker, E.T., and Wang, M.C., and Walberg, H.J., 1994-95).

Another study assessing the effectiveness of inclusion was done at John Hopkins University. In a school-wide restructuring program called *Success for All*, student achievement was measured. The program itself is a comprehensive effort that involves family support teams, professional development for teachers, reading, tutoring, special reading programs, eight-week reading assessments, and expanded opportunities for pre-school and kindergarten children. In assessing effectiveness, a control group was compared with the students in Success for All programs. Comparative measures included Woodcock Language Proficiency Battery (1984), Durrell Analysis of Reading Difficulty (1980) and student retention and attendance. Comparisons were made at first, second, and third grades. Students identified with exceptional education needs were included in all comparisons.

While assessments showed improved reading performance for all students, the most dramatic improvements occurred among the lowest achievers. In spite of the fact that these inner- city schools have normally high retention problems, only 4% of the fourth graders in the experimental group had ever been held back one or more grades, while the five control schools had 31% who had failed at least one year. There was a similar finding in the comparison of attendance rates. The research also found the best results occurred in schools with the highest level of funding. They concluded that when resources are available to provide supplementary aids, all children do better as a consequence.

The primary importance of research on *Success for All* is that it demonstrates that with early and continuing intervention nearly all children can be successful in reading. Common practice in compensatory and special education is to identify children who have already fallen behind and provide remediation services that last for years

(Salend, 2001). Research on *Success For All* and other intensive early intervention programs such as *Reading Recovery* (Salend, 2001) and *Prevention of Learning Disabilities* (Silver and Hagen, 1989) suggests that there are effective alternatives to remedial approaches.

While researchers are cautious in their conclusions, there are some positive signs. In particular, students in special education and regular education showed several positive changes, including:

1. A reduced fear of human differences accompanied by increased comfort and awareness (Salend, 2001);

2. Growth in social cognition (Salend, 2001);

3. Improvement in self-concept of non-disabled students (Salend, 2001);

4. Development of personal principles and ability to assume an advocacy role toward their peers and friends with disabilities; and warm and caring friendships (Bogdan and Taylor, 1989).

5. Warm and caring friendships (Bogdan and Taylor, 1989).

The final issue shared by proponents of inclusion relates to cost-effectiveness. A 1989 study found that over a fifteen-year period, the employment rate for high school graduates with special needs who had been in segregated programs was 53%. But for special needs graduates from integrated programs the employment rate was 73%. Furthermore, the cost of educating students in segregated programs was double that for educating them in integrated programs (Salend, 2001). A similar study by Affleck, Madge, Adams and Lowenbraun (1988) demonstrated that the integrated classroom for students with special needs was more cost-effective than the resource program, even though achievement in reading, math and language remained essentially the same in the two service delivery models.

It is apparent throughout the literature that the amount of time that children are pulled out of regular classrooms has become a concern. While in many cases pull out is supported by the exceptional and regular education teachers and parents, there is mixed evidence of improved academic performance.

Most groups and individuals believe that inclusion in the regular classroom is appropriate and that a continuum of placement options and services must be available. These decisions must be based on the needs of the child, her/his peers, and the systems ability to meet those needs. One of the greatest challenges contributing to this debate is the relative lack of similarity between the regular and special education systems that exist in today's districts and schools (Wang et al.,1993) (Elliott, B. and Riddle, M., 1992).
Successful inclusion practices depend on restructured schools that allow for flexible learning environments, with flexible curricula and instruction. Under ideal conditions, all students work toward the same overall educational outcomes. What differs is the level at which these outcomes are achieved, the additional support that is needed by some students and the degree of emphasis placed on various outcomes.

A restructured system that merges special and regular education must also employ practices that focus on high expectations for all and rejects the prescriptive teaching, remedial approach that leads to lower achievement (Guess and Thompson, 1989, Heshusius, 1988). Since 1975, the law of the land has been that students with disabilities should be provided with the opportunity to be educated "to the maximum extent appropriate" with non-disabled students, yet high levels of unnecessary and unwanted segregation persist.

Students with disabilities are being included at every level of the education system as a result of efforts by all of those concerned about them: parents, advocates, teachers and

administrators. In addition, including children are increasingly evaluating the effectiveness of inclusive education with disabilities in assessments of school performance.

IMPACT OF INCLUSION ON STUDENTS WITH DISABILITIES

Students with disabilities are more likely to succeed in effective inclusive schools because teachers, administrators, specialists, paraeducators, volunteers and typical classmates are working together to ensure that every student is valued, respected and accepted for who he or she is and is provided with meaningful and appropriate learning experiences. Emerging data suggests that students with disabilities do better academically and socially in inclusive settings (Salend, 2001). This is true for students with high-incidence disabilities (Salend, 2001) and those with low-incidence disabilities (Salend, 2001).

Although many studies are appearing in the literature that support the academic and social benefits of inclusion, a recent study by Rea (1997) is noteworthy for several reasons. First, Rea collected extant data on schools over time. Most of the data she used could be easily collected in school systems interested in comparing the efficacy of pullout and inclusive approaches. Second, the results from her study provide additional support of inclusive education. Rea compared the academic performance of middle school students with learning disabilities in inclusive schools with similar students who were served for comparable periods in pullout programs. Demographic data showed the groups were comparable in age, gender, ethnicity, socioeconomic status, IQ, years of special education services, years of education in one model or the other and mothers' educational levels. Students in the inclusive classroom outperformed those in pull-out programs across a number of important school performance indicators: they earned higher grades, achieved higher scores on standardized tests, attended

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more school days, failed fewer classes, and were involved in no more behavior infractions than students in more restrictive placements.

Studies have shown that typical to high-achieving students are not harmed in the inclusion process (Carlson, 1997). Emerging studies suggest that the presence of identified students in general education settings may enhance classroom-learning experiences for peers who may be at risk academically or socially (Carlson, 1997), as well as high achieving students (Wagner, 1993). This is understandable given the extra help to all class members when a learning specialist is present who can target specific problems as students work and develop appropriate intervention strategies immediately to address these concerns (Wagner, 1991).

When inclusion is implemented effectively, ongoing daily involvement in each other's lives helps students become more empathetic and understanding as they develop a better appreciation for unique qualities that all people possess (Wagner, 1993). Emerging studies suggest that these aims to improve attitudes in inclusive schools are realistic (Rea, 1997).

Although the inclusion of children with disabilities in classrooms with their non-disabled peers is a necessary and significant step forward, more is needed. Society has been reshaped as a result of changing economic conditions, demographic shifts, racism and sexism, changes in the structure of families and increases in substance abuse and child abuse. These changes directly effect the youth of today. The schools must now respond and meet the needs of increasingly diverse groups of students who challenge the school structure. With society as a whole pushing for school reform, inclusion and inclusionary practices will continue to be implemented in today's educational system.

CHAPTER III
METHODOLOGY AND PROCEDURES

DESIGN OF STUDY

The purpose of this study is to collect grade point average data of included sophomore learning disabled students in Core English II, Core B Math and Introduction to Earth Science during the 94-95 academic year when no in class support was provided and compare this data to a comparable group of individuals' grade point averages in the same course of study during the 98-99 academic school year when support was provided. Academic performance of students is one factor that can be measured to help evaluate the effectiveness of an inclusion program.

SELECTION OF SUBJECTS

The subjects for this study all attended or are presently attending Rancocas Regional High School in Mount Holly, New Jersey. Each subject is a classified learning disabled student who earned an academic grade in Core English II, Core B Math and Introduction to Earth Science. Subjects earning grades from the 94-95 school year did not receive in class support from a special education teacher, however subjects earning grades form the 98-99 school year did receive in class support from a special education teacher. Course scheduling was random and was done by a computer program. Individual classes varied on both the number of total student enrolled in the course, as well as, the number of special education students on the class roster.

DATA GATHERING INSTRUMENT

Learning disabled students from the 94-95 school year needed to be identified. Unfortunately due to a change in computer programs three years ago, no lists of students prior to 1996 were maintained on the computer. Also, data processing and the Child Study Team did not have a paper copy of classified students attending Rancocas Valley that year. However, the Child Study team did have boxes of cards logging the names and basic information of special education students who attended Rancocas Valley. Cards stating students who attended school during the 94-95 school year were pulled. A list of one hundred students was derived. From that list, record cards from the basement of the building were gathered through the guidance department. From these cards, grade point averages were recoded for students who took Core English II, Core B Math and Introduction to Earth Science.

A comprehensive list of all classified students attending Rancocas Valley was obtained through the child study team office. Class lists of Core English II, Core B Math and Introduction to Earth Science were printed out from data processing. The lists were cross-referenced to determine the names of classified students enrolled in these three classes. Once the list was derived grade point averages were looked up on the computer.

RESEARCH DESIGN AND ANALYSIS OF DATA

Grade point averages for Core English II, Core B Math and Introduction to Earth Science will be individually presented for the school year of 94-95 and 98-99. The number of male and female students enrolled in each class during each respective year will be documented. Through the use of tables, the data will be presented to show a comparison of grade point averages of

students without inclusive special education support and the grade point averages of students who received inclusive support from a special education teacher.

CHAPTER IV
ANALYSIS AND INTERPRETATION OF DATA

The results of the study are presented in a format which attempts to answer the research questions listed in Chapter I. A t-Test assuming equal variances was used to determine if statistically significant differences existed across groups of students who received in class support versus those that did not. Data analysis was completed using the Excel program contained in the Rowan University Computer Network System.

RESULTS

The results of this study are presented in a format that answers the questions listed in Chapter I. The questions are discussed sequentially and the data pertaining to these questions are presented in the form of discussion and tables.

- **Question One:** Is there a significant difference in GPA obtained by included students in Core II English during the 94-95 academic year when no in class support was provided to a comparable group of individuals placed in Core II English during 98-99 when in class support was provided.

Table 1
Comparison of Achievement in English II Core in 1994-1995
and
English II Core Fall 1998 (N= # of subjects)

	1994-1995		Fall 1999		Statistical Difference
	M	SD	M	SD	
English II Core	76.06	10.51	74.41	10.60	1.65*

* **Not significant at the .05 level of Type I error.**

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Table 2
Comparison of Achievement in English II Core in 1994-1995
and
English II Core Spring 1999 (N= # of subjects)

	1994-1995		Fall 1999		Statistical Difference
	M	**SD**	**M**	**SD**	
English II Core	76.26	10.07	73.79	9.87	2.47*

* **Not significant at the .05 level of Type I error.**

As indicated in **Table 1 & 2** the English II Core group without inclusive support and the group with inclusive support were not significantly different on the levels of achievement with means of 76.16 and 74.10 respectively. Since the measure of achievement was final grade, expressed as a percentage of 100, it indicates that all groups had the same level of achievement.

- **Question Two:** Is there a significant difference in GPA obtained by included students in Core Math B during the 94-95 academic year when no in class support was provided to a comparable group of individuals placed in Core Math B during 98-99 when in class support was provided.

Table 3
Comparison of Achievement in Core Math B in 1994-1995
and
Core Math B Fall 1998 (N= # of subjects)

	1994-1995		Fall 1999		Statistical Difference
	M	**SD**	**M**	**SD**	
English II Core	71.97	17.27	75.37	14.30	3.40*

* **Not significant at the .05 level of Type I error.**

Table 4
Comparison of Achievement in Core Math B in 1994-1995
and
Core Math B Spring 1999 (N= # of subjects)

	1994-1995		Fall 1999		Statistical Difference
	M	SD	M	SD	
English II Core	71.97	17.27	74.41	13.06	2.44*

* Not significant at the .05 level of Type I error.

As indicated in **Table 3 & 4** the Core Math B group without inclusive support and the group with inclusive support were not significantly different on the levels of achievement with means of 71.97 and 74.89 respectively. Since the measure of achievement was final grade, expressed as a percentage of 100, it indicates that all groups had the same level of achievement.

- **Question Three:** Is there a significant difference in GPA obtained by included students in Introduction to Earth Science during the 94-95 academic year when no in class support was provided when compared to a comparable group of individuals placed in Introduction to Earth Science during 98-99 when in class support was provided.

Table 5
Comparison of Achievement in Introduction to Earth Science in 1994-1995
and
Introduction to Earth Science Fall 1998 (N= # of subjects)

	1994-1995		Fall 1999		Statistical Difference
	M	SD	M	SD	
English II Core	72.32	10.97	74.39	21.84	2.07*

* Not significant at the .05 level of Type I error.

Table 6
Comparison of Achievement in Introduction to Earth Science in 1994-1995
and
Introduction to Earth Science Spring 1999 (N= # of subjects)

	1994-1995		Fall 1999		Statistical Difference
	M	SD	M	SD	
English II Core	72.32	10.97	76.33	10.78	4.01*

* Not significant at the .05 level of Type I error.

As indicated in **Table 5 & 6** the Introduction to Earth Science group without inclusive support and the group with inclusive support were not significantly different on the levels of achievement with means of 72.32 and 75.36 respectively. Since the measure of achievement was final grade, expressed as a percentage of 100, it indicates that all groups had the same level of achievement.

These results will be discussed in greater detail in Chapter 5.

CHAPTER V
SUMMARY, CONCLUSIONS AND RECCOMENDATIONS

SUMMARY

The IDEA mandates that a free, appropriate education be provided to all students with disabilities. It is necessary that education practices be held accountable for their effectiveness. Implementation of inclusion must be an appropriate placement, resulting in positive outcomes for students with disabilities. Academic performance of special education students is one factor that can be measured to help evaluate the effectiveness of an inclusion program. This information can help analyze the effectiveness of such a program, validate successful policies that should be continued, and pinpoint the need for revision.

The purpose of this study was to collect grade point average data of included learning disabled students in Core English II, Core B Math and Introduction to Earth Science during the 94-95 academic year when no in class support was provided and compare this data to a comparable group of individuals' grade point averages in the same course of study during the 98-99 academic school year when support was provided.

The data reveals that there are no significant differences between the academic achievement of special education students receiving in class support as compared with special education students that did not receive in class support.

CONCLUSION

The results of this study show that in class support in Core English II, Core B Math and Introduction to Earth Science did not significantly increase the academic success of special education students in comparison with special education students without inclusive special education support. Statistically, grade point averages did not show a large enough increase to indicate that inclusive support is beneficial in terms of achievement.

DISCUSSION AND IMPLICATIONS

Although the findings of this study did not support the need for inclusive support, many factors contribute to the academic success of students. It does not indicate the inclusive education is not an appropriate setting for special education students. School districts must insure responsible inclusion program practices.

I feel the integrity of the English II Core, Core B Math and Introduction to Earth Science classes has been greatly reduced over the last several years. Larger numbers of learning disabled students have been placed in these courses. An inclusive class of eighteen may have nine special education students, three English as a Second Language (ESL), students and only five non-classified, basic skills students. The majority of special education students in these classes have specific learning disabilities. Instead of adapting a curriculum to meet individual needs, most of the class need modifications, thus the entire curriculum becomes adjusted. The demand for rigorous academic curriculum has gradually diminished. The true intent of inclusion has been lost and these support classes are now equivalent to large resource center classes.

The inclusion classes used in this study all have a core curriculum teacher and a special education teacher in the room. The interpersonal relationship between these two professionals

was not explored, as well as the classroom dynamics. Team teachers often have different teaching philosophies. Mainstreamed teachers sometimes feel threatened by having another teacher in the room and prefer not to relinquish classroom control. The end product of a situation like this would be the support teacher might be viewed as a glorified aide and possible animosity between team teachers. Environmental conditions within the classroom may greatly affect academic productivity.

Oftentimes mainstream teachers prefer not to work with special education students or the weaker teachers are assigned to these classes, while the stronger teachers instruct higher level material. Unfortunately, the stronger teacher should be the professional working with the students who are academically challenged. These teachers are often just arbitrarily informed that they will be working with another colleague in an inclusive classroom. Developing a personal relationship is integral to special education student success. If the teacher is not to teach in that classroom it is very hard to foster that criticl connection between staff and student.

Consultation encourages collaboration among school personnel to meet students' special needs. Teachers should have time allocated specifically to consult with colleagues about special education students in the mainstream with inclusive support. The class schedule should foster consultation time between teachers. Although the special education teacher does have a half hour period for consultation, his/her mainstream teacher does not have a scheduled time period. Block scheduling does not lend itself to staff interaction. Teachers are instructing three blocks a day, have a half-hour lunch, a grade room duty and a preparation period. If a special education teacher's schedule does not align with a mainstream teacher he/she needs to speak with concerning a student, it is difficult to find time during the day for them to meet.

Common preparation periods are also important. This time enables co-teachers to discussion students, curriculum, strategies, discipline and possible solutions to classroom problems. It enables special and general education teachers to work together more effectively. However, the common prep period is difficult to schedule, especially when many special education teachers are not assigned in the same classroom throughout the day. A support teacher may have a common prep with one team teacher but not the other two teachers. If a team has been working together for several years, which is rare, it is determined that a common prep is no longer necessary. An effort is made for new teams to have a common prep at least for half of the school year.

General education teachers who are co-teaching in an inclusion program are sent for specialized training. If the special education support teacher is a novice to inclusion, he/she is also sent for training, but a team is not sent together. This practice does not foster cooperative teaching. Teams should be trained together for this training and established teams should also be included.

The administration needs to consider taking an active role in promoting and fostering inclusive education. Limitations for special education students within mainstreamed course with support should be considered. An effort towards scheduling common preparation times and consultation times should be incorporated into the work schedule. All teachers should receive training on inclusion with the intent of establishing better understanding of and a willingness to teach in an inclusive setting.

RECOMMENDATIONS

The following recommendations are offered for consideration:

1. A larger sample size would offer the opportunity to obtain more reliable results if this study was to be replicated.

2. A study comparing students' academic success in resource centers and their success after they were placed in inclusion courses in the same subject area.

3. A study that explores the effect of other factors on special education student in an inclusion classroom.

4. A study that explores the effect of inclusive education on the general education student.

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