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A LONGITUDINAL STUDY ON THE EFFECTIVENESS OF PRESCHOOL SPECIAL EDUCATION

by Kimberley L. Maneval

A Thesis

Submitted in partial fulfillment of the requirements
of the Master Of Arts Degree
of
The Graduate School
at
Rowan University
April 14, 2005

Approved by

Professor

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ABSTRACT

Kimberley L. Maneval
A LONGITUDINAL STUDY ON THE EFFECTIVENESS OF PRESCHOOL SPECIAL
EDUCATION
2004-2005

Dr. Robert Kern

Master of Arts (MA) in School Administration Elementary/Secondary Principal

The purpose of this longitudinal cohort study was to analyze the grade school placements of children who received preschool special education services in order to determine how this type of early intervention impacted future learning. Data was obtained through non-interactive evaluation of existing class lists, student records, and Application for State School Aide (ASSA) reports of 342 disabled or developmentally delayed children between 3 and 5 years of age who participated in Evesham Township's Preschool Disabled Program between 1990 and 2001. Data from this study was also used to re-evaluate the preschool curriculum, policies and procedures, and to plan new program goals and objectives.

Research findings of this study supported one of the three hypothesis parameters. A greater percentage of students than hypothesized was declassified. However, a smaller percentage of students than expected received in-class support or pull-out replacement special education assistance in a regular classroom. More students than predicted required either a self-contained or an out-of-district special education program. Findings of this study reflected information presented in Chapter 2 the Literature Review, which highlighted the positive impacts early childhood special education has had on long-term academic progress of children with disabilities.

Acknowledgements

This thesis is dedicated to my father, who was an educator and school administrator for 37 years. He taught me to value education, to set high goals, and to always be a leader. These three qualities, which have provided a strong foundation for my teaching career, will continue to be valuable as I begin my quest to become a school administrator.

I would like to thank my advisor, Dr. Kern, for his patience and guidance throughout the internship process, and Geralyn Kennedy, my field mentor, who provided me with valuable administrative learning experiences and many words of wisdom.

To my colleagues and the administrators in the Evesham Township School District who provided me with a wealth of information, participated in surveys, collaborated on ideas, proofread my thesis, and provided smiles and words of encouragement, I am grateful for all your support. Thank you.

To my husband, sons, and family members who were supportive throughout this Master of Arts Degree journey and all my other years of schooling, I truly appreciate your love and dedication. Thank you!

Table of Contents

Acknowledgements	iii
Chapter 1 Introduction	1
Chapter 2 Literature Review	14
Chapter 3 The Design of the Study	37
Chapter 4 Research Findings	42
Chapter 5 Conclusions, Implications and Further Study	47
List of References.	60

List of Tables

Table 1	Percentages of Preschool Students in Grade Level Placements	44
Table 2	Grade Placement Percentages for Preschool Males and Females	45
Table 3	Types of Grade School Academic Assistance	46

Chapter 1

Introduction

Focus of the Study

As local funding for public schools continues to increase, taxpayers are seeking greater accountability for programs and services offered to students. According to the Individuals with Disabilities Act (IDEA) of 1990, children who may be at risk educationally or who have been diagnosed with a developmental delay or disability are entitled to a free and appropriate public school education. The focal point of this initiative was that providing early childhood special education assistance was cost effective, and saved money on future educational programs and services. To remain in compliance with IDEA mandates, the Evesham Township School District provided preschool special education services to children between the ages of 3 and 5 who have been identified as having a developmental delay or disability. This longitudinal cohort study, which included 342 students who participated in the Evesham Township Preschool Disabled Program in Marlton, New Jersey, between 1990 and 2001, focused on determining three main objectives. First, the percentage of preschool disabled students who during their grade school years were declassified and did not require further special education assistance. Second, the percentage of students who attended a regular education program while receiving in-class support or pull-out replacement special education support services. Third, the percentage of students who attended a special education program in a self-contained classroom, or required a specialized out-of-district educational placement.

The results of this study provided data that showed the trends and effectiveness of Evesham Township's preschool special education services. Information from this study was also used to re-evaluate the preschool program's curriculum and assessment system, policies and procedures, and addressed questions and concerns regarding educational accountability from community members and parents of non-disabled children.

Purpose of the Study

The purpose of this study was to review and analyze the grade school placements of children who participated in Evesham Township's Preschool Disabled Program in order to determine how these early intervention services impacted future learning. Current research reflected the importance of early educational intervention for all children, especially those with disabilities. The Evesham Township School District provided a comprehensive preschool special education program designed to meet children's individual needs by offering therapeutic and academic intervention services which were integral cornerstones for building a strong social, emotional, and academic foundation necessary for learning. Due to the nature of various disabilities and developmental delays, children with more significant needs continued to require some degree of special education or support services on an ongoing basis throughout their school years. However, with early intervention, children with mild delays often did not need any special education or additional academic support once they reached grade school.

Based on a review of recent research and literature three hypotheses were formulated. First, that at least 25 percent of Evesham Township's preschool disabled students were declassified and no longer required special education during their grade school years.

Second, that at least 50 percent of former preschool disabled students participated in a

regular education classroom while receiving either in-class support or pull-out replacement special education services. Third, that less than 25 percent of preschool disabled students required either an out-of-district placement or a self-contained special education program during grade school.

The hypotheses were tested by evaluating both the Individualized Education Plan (IEP) records and school district special education reports of children who participated in the preschool disabled program, in order to determine each former preschool student's current grade school placement and the types of special education services, if any, he or she still required. The data gathered from this research study was used to evaluate the overall impact that Evesham Township's preschool special education services had on a student's grade school placement.

Definitions

The following definitions of terms were used in this study.

Aided Instruction: Aided instruction was provided by a classroom aide, resource teacher, or teacher assistant, to classified students who participated in a regular education class and required only slight academic modifications. Aided instruction generally was provided during social studies or science lessons to students who needed assistance in following directions or staying on task for an assignment, or who needed reminders about an upcoming test, quiz, or project. The aide or assistant also provided the child with verbal and visual cues, or direct assistance when necessary.

At Risk: Children who were considered to be at risk often grew up in environments that were unsupportive of age-appropriate social, emotional, and academic development, and who were in danger of educational failure.

Classified: Students who were classified had been identified with a developmental delay or disability and required special education assistance in school.

Declassified: Declassified students were students who previously received special education support but made sufficient academic gains to eliminate the need for continued special education assistance.

Developmental Delay: A developmental delay was evident when a child did not reach age-appropriate milestones at the expected time periods. Developmental delays were often the result of genetic defects, trauma or complications at birth, and often the cause was unknown. However, some developmental delays were preventable or were lessened through early intervention services.

Disability: A disability was a severe or chronic condition, such as a mental or physical impairment, that was evident before age 22 and that limited a person's ability to perform certain tasks such as hearing, seeing, walking, living independently, etc. Disabilities generally are lifelong conditions.

In-Class Support: In-class support consisted of supplemental academic support services provided for classified students who attended a regular education program. The regular education curriculum was followed, but the workload, time allotments, and presentation of materials were modified as needed to meet a student's individual learning needs. Students who received in-class support services received academic assistance for less than 21 percent of their school day.

Individualized Education Plan (IEP): An Individualized Education Plan is a legal educational document written by a child's parents, teachers, or appropriate school personnel. The IEP defines the type, level, and method of special education service

delivery provided to the classified student in order to meet his or her specific social, emotional, and academic needs.

Monitor: Students who were monitored retained a special education classification but were fully included in a regular education program, and a special education teacher periodically monitored their educational progress. Although monitored students usually had a special need such as a hearing impairment, visual impairment, autism, or speech and language needs, each child's specific condition did not affect his or her ability to participate in a regular education program. However, if during the school year a monitored student required special education assistance, additional services could be implemented without a full educational evaluation.

Preschool Disabled: In the state of New Jersey, a child between the ages of 3 and 5 years old who was diagnosed with a developmental delay or disability and required special education services was classified under the category of preschool disabled.

Pull-out Replacement: Pull-out replacement consisted of educational support services provided outside the regular education classroom for students who were classified. The regular curriculum was followed, but the teacher modified the workload, used different textbooks or materials, and modified assessment requirements to meet a student's individual needs. Students who received pull-out replacement services were provided academic assistance from a special education teacher for 21 to 60 percent of their school day.

Self-Contained Classroom: A self-contained classroom is a special education classroom setting in which disabled or developmentally delayed children received more than 50 percent of their instruction from a special education teacher.

Special Education: special education is a form of instruction designed to meet the unique learning needs of children with developmental delays or disabilities.

Therapy Services: Therapy services which were mandated according to a child's specific developmental needs may have included: Occupational therapy, which addressed fine motor skills such as writing, cutting, zipping, buttoning, and manipulating small objects; physical therapy, which addressed gross motor skills such as running, jumping, ball skills, body movement, balance, and coordination; speech therapy, which addressed language difficulties, articulation delays, oral motor (lip and tongue) coordination, and sound production.

Limitations of the Study

The limitations of this research study included a small sample size of 342 children who attended Evesham Township's Preschool Disabled Program between 1990 and 2001. Evesham Township did not provide preschool programming for non-disabled children between the ages of 3 and 5 years old, therefore no control group was available for comparison. According to IDEA, all children from birth to age 5 who were diagnosed with a developmental delay or disability were entitled to early intervention services. With the reauthorization of IDEA in 1997, the names or categories of several disability groupings changed. For example, students who were previously considered to be neurologically impaired under the old IDEA classifications were now categorized as students with traumatic brain injury. All students in Evesham Township's Preschool Disabled Program were classified as preschool disabled, even though they may have already received a specialized diagnosis such as speech and language delay, traumatic

brain injury, autism, or cerebral palsy, etc. Therefore, due to these changes, students could not be tracked by disability groupings.

Some students who participated in the preschool program moved out of the district when they were still in preschool. For a few students, no grade school records could be located, therefore, these students were not included in some of the grade school placement tabulations.

Students' current grade placement information available for this research study was only accessible through IEP records and school district special education reports.

Standardized test results, which were not available for this project, would have provided additional valid and reliable data that compared former preschool student's educational performance, over time, to that of their typically developing peers. Parent and teacher input, along with standardized test information, would have provided greater insight into how well the preschool disabled students functioned socially and academically once they reached grade school age.

Results from this study were specific to Evesham Township's Preschool Disabled Program and did not necessarily generalize to preschool disabled programs in other school districts. This was due to differences such as school district resources; program design; school, parent, and community support; the levels and types of therapy services provided; and the types and severity of student disabilities.

Setting of the Study

This research project took place in the Evesham Township School District, located in Marlton, New Jersey. Marlton, which was settled by the Quakers in 1677, was divided in 1847 and 1872, to form what are now Marlton, Medford, and Mount Laurel, New Jersey.

Marlton is a suburban town encompassing 29.7 square miles, with a population of approximately 42, 275 people. Marlton has a Council—Manager form of government. The mayor and town council members run under a slogan, rather than a political party, and are chosen through non-partisan elections every other year. The median age of Marlton residents is 36, and approximately 38.2 percent of the families have children under the age of 18. Of the population, 91.26 percent is white, 3.11 percent is African-American, 0.07 percent is Native American, 4.07 percent is Asian, 0.02 percent is Pacific Islander, 1.96 percent is Latino or Hispanic, 0.48 percent is from other races, and 0.99 percent is from two or more races. The median household income is \$67,010, and the per capita income is \$29,494. In Marlton, only 2.8 percent of the families lives below the poverty level (Wikpedia, 2004).

The Evesham Township School District is a preschool-to eighth-grade district that serves 5,388 students. There are two middle schools with an average class size of 23.8 students, and seven elementary schools with an average class size of 15.3 students. English is spoken by 89.7 percent of the students, and only 2.05 percent is limited in English proficiency. Approximately 13 percent of the students in the school district have an Individualized Education Plan and receive special education services. There are 443 teachers in the district and 23 administrators, and the average student/faculty ratio is 15:1. All teachers in the school district have Bachelor's Degrees, 44 percent have obtained Master's Degrees, and 2 percent have Doctorates. The total educational cost per pupil is \$9,519 per year, which is \$340 below the state average. The educational costs for preschool disabled students and grade-school age children with special needs were unavailable at the time of this report (New Jersey Department of Education, 2003).

All of the Evesham Township School District's preschool special education services are provided at the Richard Rice Elementary School, which is in the Kings Grant section of Marlton. Kings Grant is a closely knit, quiet, wooded neighborhood that contains moderately priced condominiums, townhouses, and single-family homes. The community members, parents, and PTA are very proud and supportive of school activities and initiatives. There are a total of 513 students who attend Rice Elementary School, 26.9 percent of whom receive some type of special education services. The average regular education class size for Rice School is 16 students. However, in the Preschool Disabled Program, the state maximum is 12 students per class, with a special education teacher and two aides. There are eight sections of preschool disabled classes and two sections of a preschool autism class. Of the Rice Elementary School students who took the Elementary School Proficiency Assessment (ESPA), which evaluated students' math, reading, and writing skills, 87.2 percent scored at the proficient level in Language Arts and Literacy, and 50 percent of the students scored at the proficient level for Math. Rice School has 45 teachers, 42.2 percent whom have attained Master's Degrees (2002-2003 New Jersey school report card).

Significance of the Study

"No Child Left Behind (NCLB) began a new era in education that emphasizes accountability, flexibility, and parent choice. President Bush's Commission of Excellence in Special Education called for major changes in services under IDEA with a focus on results, rather than process. . . . The new focus on accountability, results, and research-based practices reveals a lack of data to describe children with disabilities and the services they receive" (Pre-Elementary Longitudinal Education Study, 2002).

This study was significant to the Evesham Township School District's teachers, school administrators, community members, and parents of preschool age children who had disabilities or developmental delays. During the past 11 years, the number of students who participated in Evesham Township's Preschool Disabled Program has grown significantly. In 1990, 18 students, one teacher, and three therapists were involved with the program, and by 2001 the program included 78 students, four teachers, and seven therapists. As property taxes have continued to rise and as accountability for educational success has increased, school districts have needed to provide evidence that children are learning and meeting expected grade level standards and proficiencies.

The results obtained from this research study provided data to describe the educational progress of preschool disabled students, described the grade school special education services they received, and demonstrated that early childhood special education services had a positive impact on grade school success. This study encouraged Evesham Township's Preschool Disabled Program teachers, therapists, and school officials to carefully examine the curriculum, learning environment, and school culture of the preschool program in order to continue to promote the success of all students through a shared vision of learning. The information and data gained from this research project also were shared with parents and community members to provide evidence of student success and to reinforce Evesham Township School District's mission of providing children with a strong foundation for learning that will "enable students to meet the challenges of an ever-changing global society" (Evesham Township Schools, 2004, p. 1).

Relationship of the Study to the Interstate School Leaders Licensure Consortium

Standards

According to Standard 1, "A school administrator is an educational leader who promotes the success of all students by facilitating the development, articulation, implementation and stewardship of a vision that is shared and communicated by the school community" (Ubben, Hughes, & Norris, 2001, p. 392). The Evesham Township School District has high standards of learning for all students. To ensure that no child was left behind, this research study encouraged Evesham Township's preschool teachers, therapists, and school administrators to celebrate the strengths of the preschool disabled program and to re-examine personal and professional beliefs and practices in educating children with a wide range of abilities. Data obtained from this research study was used to re-evaluate the existing preschool curriculum and assessment system, policies and procedures, and to plan new program goals and objectives designed to promote the educability of all children.

Standard 2 describes school administrators as educational leaders who promote "the success of all students by advocating, nurturing and sustaining a school culture and instructional program conducive to student learning and staff professional growth" (Ubben, Hughes, & Norris, 2001, p. 393). This research study evaluated the educational growth and development of Evesham Township's preschool disabled students to determine how well the program has met student needs. Data generated from this study also was used as a tool for planning professional development opportunities in order to continue to provide a safe and supportive learning environment.

According to Standard 3, "A school administrator is an educational leader who promotes the success of all students by ensuring management of the organization, operations, and resources for a safe, efficient, and effective learning environment" (Ubben, Hughes, & Norris, 2001, p. 394). Data obtained from this research study provided the Evesham Township School District with specific information on the academic program placements of preschool disabled students once they reached grade school. Knowledge of student development, teaching practices, and academic learning allowed teachers and administrators to collaborate and share in the decision-making process regarding the future direction of the preschool program.

Standard 4 describes school administrators as leaders who promote "the success of all students by collaborating with families and community members, responding to diverse community interests and needs, and mobilizing community resources" (Ubben, Hughes, & Norris, 2001, p. 395). In an effort to continue to foster positive school-community relationships, the results obtained from this study were communicated to parents and community members in order to demonstrate the benefits of addressing the needs of special education students at an early age.

Describing a school administrator as an "educational leader who promotes the success of all students by acting with integrity, fairness and in an ethical manner" (Ubben, Hughes, & Norris, 2001, p. 396) is the focus of Standard 5. This research study involved collaboration and communication among a variety of educational professionals who have significant interest and concern for the social, emotional, and academic progress of all children in the school district. Evesham Township's teachers and administrators believe in educating all students to the maximum extent possible in the least restrictive

environment. Data generated from this study highlighted not only the percentage of preschool disabled students who did not require special education assistance once they entered grade school, but also the percentage of students who, with special education assistance, participated in a regular education program.

According to Standard 6, "A school administrator is an educational leader who promotes the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context" (Ubben, Hughes, & Norris, 2001, p. 397). Student success is dependent upon many factors: A strong school culture which helps prepare students to become contributing members of society; collaboration and communication among teachers, parents, administrators and community members, which fosters positive relationships between members of the child's support team; and family involvement in a child's educational journey, which increases the child's opportunities for achievement.

Organization of the Study

The remainder of this study was organized as follows: Chapter 2: Review of the Literature summarizes various studies that discuss the impact of preschool special education; Chapter 3: The Design of the Study, describes the sample of students involved in the project, the sampling techniques, and the data analysis plan; Chapter 4: Research Findings, provides a presentation of the research findings, data, and data tables; and Chapter 5: Conclusions, Implications, and Further Study, discusses the conclusions drawn from this study and possible implications for further inquiry.

Chapter 2

Literature Review

Early childhood always has been a critical time for growth and development, especially for children who have a disability or developmental delay. Between the ages of 3 and 5, children's cognitive, social, emotional, and physical development occurs at a rapid rate. During this time period, a variety of learning and educational patterns become established. Research studies have found that the early educational years provide the foundation for future school and personal success.

According to Afifi and Bergman:

Developmental research has shown that there are developmental windows of opportunity for different brain functions. Thus, the window of opportunity for emotional development is 0-2 years, mathematics and logic is 0-4 years, language is 0-10 years, and music 3-10 years. These windows of opportunity if not utilized by parents and educators will lead to impairment or loss of appropriate function (*Windows of Opportunity*, p. 1).

Also, studies by neurologist Harold Chugani of Children's Hospital in Michigan have found that during early childhood, a child's brain was twice as active as an adult's brain until the child reached about age 10, when brain activity tended to level off. During these early years, new neural pathways and connections were formed and strengthened by

frequent and repeated stimulations. Martha Pierson, a neurobiologist at Baylor College of Medicine, believed that early education "shapes the basic architecture of the computer (brain). If you are exposed to enough things, you'll later develop a processor that can handle the flood of data that life throws at you later" (Nadia, 1993, p. 3).

Early intervention services, which usually are implemented before the age of three, were designed to improve the development of a child who was considered to be at risk for educational failure, or who had been diagnosed with a disability or developmental delay. "There are three primary reasons for intervening early with an exceptional child: to enhance the child's development, to provide support and assistance to the family, and to maximize the child's and family's benefit to society" (What is Early Intervention? p.1).

Learning develops most rapidly during the preschool years. If certain developmental skills are not acquired early in life then a child may experience difficulty attaining these competencies later on. Second, parents and family members of a disabled or developmentally delayed child often felt disappointed, isolated, frustrated, and stressed with meeting the demands of their child's needs. Early intervention, which focused on the child alone or on the child and the family together, often resulted in improved family attitudes and more time for family work and leisure. Early intervention also instilled a greater knowledge and understanding of the skills needed for teaching and caring for the child and his or her needs.

A third reason for intervening early was that society will reap maximum benefits. The child's increased developmental and educational gains and decreased dependence upon social institutions, the family's increased ability to cope with the presence of an exceptional child, and perhaps the

child's increased eligibility for employment, all provide economic as well as social benefits (What is Early Intervention? p. 2).

For the intents of this research paper, the terms "early intervention" and "preschool special education" were used interchangeably and represented children between the ages of 3 and 5 years old who had been diagnosed with a disability as described in IDEA, part H for infants and toddlers, part B for 3- to 5-year-old children. Some general principles that emerged from early intervention research included the idea that society has a responsibility to provide programs and services to children who have developmental disabilities or are considered to be at risk. The early years of development presented an opportune window of time for influencing child development and for supporting the needs and education of families who had children with delays or disabilities. By addressing children's developmental needs at an early age, the degree to which future special education and intervention are needed may be decreased or eliminated.

In the late eighteenth century, Jean-Marc Gaspard Itard attempted to teach the "Wild Boy of Aveyron" by using behavior modification techniques. Years later, Edouard Seguin, a student of Itard's, believed in the concept of early intervention, and by observing children with disabilities, he designed educational programs that addressed a student's strengths and needs. Marie Montessori, a physician who opened the first nursery school in Rome, eventually adopted Seguin's methods. She worked with students who had cognitive disabilities and used her specialized instructional techniques to help poor and disabled children succeed educationally.

Nursery schools became popular in the 1920s, and their focus was to nurture and expand young children's social and emotional development, as well as to encourage

parents to participate in school programs. During the Depression of the 1930s, the number of nursery schools increased dramatically in order to provide jobs for unemployed teachers. During the 1940s, nursery schools gained even greater popularity among women who began working for the war effort. However, following the war, many women left the workforce and returned to raising their families. Children who attended nursery school after the war tended to come from more affluent families.

For more than a century, the needs of disabled children have been recognized, but not until recently have appropriate programs and services become available. In 1912, the Children's Bureau was established to address concerns regarding high infant mortality rates, children's poor physical health, and the exploitation of child labor practices. This step marked the first time that the Federal government recognized and addressed responsibility for promoting the welfare of children who were considered to be at risk or who already had a disability. Eventually, support services from the Children's Bureau led to the enactment of Title V of the Social Security Act of 1935 (PL 774-271). Title V, which was aimed at prevention, included health services for mothers and children, services for children with orthopedic disabilities, and eventually set forth state responsibilities for the provision of services to children with disabilities. The first true early childhood intervention services and training were provided through the Handicapped Children's Early Education Act of 1968 (PL 102-119), which encouraged family support services, parent-professional collaboration, and more detailed and accurate evaluation practices. "This early legislation did not provide for "mainstreaming" or a "free appropriate public education," but it established the groundwork for future legislation concerning these issues" (LaMort, 2002, p. 306).

In an effort to end discrimination against individuals with disabilities, Congress passed the Vocational Rehabilitation Act, Section 504 (PL 93-112), in 1973. This act was the first civil rights law that prohibited publicly funded programs from discriminating against disabled persons. In a continued effort to secure educational services for children, the Education for all Handicapped Children Act of 1975 (PL 94-142) became a landmark Civil Rights decision that provided legal rights and procedural protections to students and guaranteed a free and appropriate public school education to all school-age children. Unfortunately though, some children, especially those with disabilities, still were being excluded.

It was, however, the Education of the Handicapped Act Amendments of 1986 (PL 99-457) that virtually ensured services for preschool children and created a new comprehensive program for infants and toddlers with disabilities while encouraging additional programs for children at biological or environmental risk. The emphasis on families, coordinating community services and supports, and fostering parent-professional partnerships were among the early intervention concepts that found expression in this legislation (Guralnick, 1997, pp. 4 - 5).

PL 99-457 was passed as a preventive measure, on the grounds that early intervention was cost effective and saved money on special education services that would be needed in the future.

This bill contained two essential parts. Part B (Section 619) created funding incentives for states to provide public education for all eligible 3-to 5-year-old children with disabilities by 1991-92; Part H (now known as

Part C) offered encouragement and assistance to states to implement early intervention from birth to 3-year-old children with disabilities, but it did not require them to do so (Trohanis, 1994; Shonkoff & Meisels, 2000, pp. 525-526).

In 1990, Congress renamed the Education of the Handicapped Act, to the Individuals with Disabilities Education Act (IDEA), and changed the term "handicapped children" to "children with disabilities." "The Individuals with Disabilities Education Act (IDEA) sought to change and improve services to young children with disabilities and their families, and the provisions of this law created hope in many parents that the dreams for their children might be realized" (Shonkoff and Meisels, 2000, p.407). IDEA provided financial incentives for states to provide comprehensive programs and services for children at risk or with disabilities. In 1990 Congress also passed the Americans with Disabilities Act (ADA).

The ADA extended antidiscrimination protections similar to Section 504 protections in public institutions to many private sector areas, including employment, public accommodations, transportation, and telecommunications. In 1997, IDEA was reauthorized to extend federal funding for special education services and to assure that all children with disabilities were provided with a free and appropriate public school education that meets their specific needs. By providing services from birth when necessary, lawmakers hoped to decrease or eliminate the need for special education services as these children reached school age. These three laws, Section 504, the IDEA, and the ADA, provide the primary

legal protections available for individuals with disabilities (LaMorte, 2002, p. 306).

Today's Head Start programs, which evolved from the Economic Opportunity Act of 1964 (PL 88-452), consisted of adult and community development programs that were designed for children living in poverty. Not only did Head Start programs address children's health and development needs, they also provided support for parents. Research from the Perry Preschool Project and other Head Start initiatives (Shonkoff & Meisels p. 516-518) has shown that disadvantaged children who were involved with a Head Start program showed gains in IQ. Even though the IQ gains were not always maintained as the children grew older, the early educational services produced positive and lasting effects in the areas of social and emotional development. According to Rolnick and Grunewald (March 2003, p. 3), "the quality of life for a child and the contributions the child makes to society as an adult can be tracked back to the first few years of life." Many research studies have shown that disadvantaged children who participated in Head Start Programs completed more years of schooling, were retained in grade less often, required fewer special education services, scored higher on standardized tests, spent less time in jail, and earned higher monthly incomes than peers who did not receive Head Start intervention services.

Most research in the early 1980s focused on determining whether early intervention programs actually worked. In the late 1980s to 1990s, researchers began to look at what types of early intervention programs and services worked, for which children and families, and why. However, assessing program effectiveness has been difficult due to the variability in programs, the types and quality of services offered, the socioeconomic

status of the families, and the disabilities of the children. Positive results in one study did not necessarily yield the same results in another study. There can be varying effects of intervention for different disabilities, and sometimes when looking at a group as a whole, the underlying intervention process was not evident. Some disability groups may have made significant progress and other disability groups may have made fewer gains, but that information did not consistently show up when looking at results as a whole. Researchers continue to ask what intervention services worked best, with whom, and under what conditions early intervention was most successful.

According to Guralnick (1997), early intervention programs for children with disabilities have been very successful from a public policy perspective; however, success from a scientific perspective was less obvious due to methodological difficulties and challenges. Determining the success of programs has been difficult because assessment instruments were varied and were not necessarily standardized for students with disabilities. Some early childhood special education programs were geared toward students with certain disabilities, and not others. There have been few long-term studies on the effectiveness of early intervention programs for disabled children because special education services are mandated for all 3- to 5-year-olds in this category, and control groups often were not available. Since a child's social, emotional, and educational needs may vary depending on the disability, no single intervention plan has been deemed successful with all children. In order to provide services mandated by PL 99-457, many school districts have had to create their own systems for identification of special education needs, educational programming, and measurement and evaluation systems. Researchers still do not know what combination of services will produce the most

positive long-term educational effects for children with disabilities. For many of the studies that have been conducted, there frequently has been no data past the intervention period. Therefore, researchers have had difficulty specifically determining how disabled children who participated in preschool special education programs succeeded educationally once they reached grade school age.

Some researchers believed that preschool education programs promoted positive and lasting effects on children's cognitive and social growth. According to Salisbury and Smith, (1993):

Over 50 years of research on children with many types of disabilities receiving a range of specialized services in many different settings has produced evidence that early intervention can: (1) ameliorate and in some cases, prevent developmental problems; 2) result in fewer children being retained in later grades; (3) reduce the educational costs to school programs; and (4) improve the quality of parent, child, and family relationships. In addition to encouraging parent involvement it has been found that the most effective interventions are those that also: (1) occur early in a child's life, (2) operate from a more structured and systematic instructional base, (3) prescriptively address each child's assessed needs, and (4) include normally developing children as models. (p.1)

A study conducted by Markowitz and Larson that took place in Montgomery County, Maryland, evaluated the effectiveness of early intervention services on 646 preschool disabled children between 3 and 5 years of age. At the time of initial diagnosis, 40.7 percent of the children had language delays, 25.2 percent had multiple disabilities, 22.0

percent had speech delays, 4.6 percent had auditory impairments, and 4.2 percent had visual impairments. Additionally, 3.3 percent of the students in the study were not assigned to a group at the time of placement. Limitations of the study included the lack of a control group because all children with disabilities were eligible to receive special education services, and the services provided could not be manipulated because law mandated them.

Upon initial assessment, students with language impairments demonstrated delays of six months or more in almost all areas of development. Following intervention, student's language growth approximated that of peers who were not language-impaired. However, as the children approached age 6, their language growth rates diminished slightly. Language-impaired students appeared to benefit significantly when services were provided at an earlier age.

Children with multiple disabilities demonstrated positive program effects in all areas except fine and gross motor skills. Even though children with multiple disabilities received the greatest number of services, they still scored well below the age norms in all areas of assessment. Over the long term, this group of students tended to fall further behind their same-age peers in all areas of development. Strengths in areas such as language and adaptive skills appeared to help children with multiple disabilities overcome weaknesses in other areas.

Early intervention services did not appear to have a significant impact for children with speech delays. Results from this part of the study found that speech-delayed children tended to benefit from intervention more quickly when they were older. Although speech-delayed children demonstrated difficulty with speech articulation and fluency,

they had near normal skills and development in all other skill areas throughout the study.

Results also showed that short-term benefits were noted only in the area of cognitive development, while other areas of growth progressed at the same rate as non-disabled peers.

At the time of the pre-test, children with hearing impairments had nearly normal scores in the areas of cognitive and fine motor abilities but demonstrated delays in the areas of personal and social skills, gross motor skills, and adaptive or self-help behaviors. Even with more than two years of intervention services, the hearing-impaired children progressed more slowly than their same-age peers. No short-term program gains were noted because of the small sample size of this group.

Students with vision impairments had near age-appropriate pre-test scores for language, personal and social development, and cognitive abilities. However, after two years of intervention, visually impaired children continued to develop more slowly than their same-age peers. Due to such a small sample size of children with visual impairments, the results of this part of the study did not necessarily yield conclusive results.

Based on the results of the entire study, however, Markowitz and Larson concluded that preschool-age children with disabilities reaped significant benefits from preschool special education intervention, and the most positive and lasting effects were achieved when children began receiving services early in life.

According to research conducted by Dr. Rita Weiss, a 1981 study by Karnes et al found that 86 mildly to moderately disabled children who had participated in a preschool special education program made a successful transition into kindergarten.

Eighty percent of the children were placed in regular education. Of this group of children, 40 percent received support services, and only 15 percent had been retained. Data from the study indicated that early intervention with the young handicapped child provided these children with the social and academic skills needed to function adequately in regular school classes. (Weiss, 1980, p. 9)

Through his research, Karnes determined that children with varying degrees of developmental disability benefited from early intervention services, and these social, emotional, and academic gains continued to remain evident for many years.

A longitudinal study by Weiss (1980) at the University of Colorado used the In Class ReActive Language Program, (INREAL) for bilingual students and children with language delays. Five-hundred eighteen children from four school districts participated in the study. The INREAL Program was carried out in the classroom and placed an emphasis on language development in a non-threatening or stigmatizing way. Dr. Weiss determined that children who received preschool special education scored higher on tests and required fewer special education support services during their school years than the children who did not receive early special education intervention. Almost one third of the disabled students who received preschool special education services in her study were able to begin a public school education without special education support. Based on the results of her study, Weiss believed that preschool special education programs had a positive effect on development, which in turn positively impacted later progress and school success, reduced the effects of some disabling conditions, and also reduced the long-term costs of special education services.

A study by Suzanne Raber evaluated the educational progress of children who were identified as having a disability either during preschool or kindergarten. The children's disabilities ranged from mild speech and language delays that were diagnosed at age 5 to multiple disabilities diagnosed at birth. Raber followed a sample of 620 students enrolled in Montgomery County Public Schools, for three to nine years after these children were diagnosed with a disability or delay. Through her research study, Raber determined that early identification procedures worked effectively because fewer undiagnosed children were showing up in kindergarten. Children who participated in the preschool special education program tended to be white, came from higher socioeconomic families, and entered the program at an earlier age. Most of these children who had been diagnosed with a disability before the age of 4 were classified as multiply disabled and were placed in self-contained special education programs. Children from lower socioeconomic families frequently were not diagnosed until about age 4, when they entered a Head Start Program. These children often were classified as speech impaired and generally received itinerant speech services only. Raber's study (1985) found that:

Among the preschool-identified children, 13 percent were no longer considered handicapped, 17 percent had moved to less restrictive environments, 53 percent remained in the same amount of service, and 17 percent required a greater amount of service four to nine years after identification (p. E3).

Some children, by the nature of their disability, will always require some type of special education assistance. However, the children involved in Raber's study who performed better educationally and required fewer special education services later in

school tended to be children from higher socioeconomic families, were diagnosed with a speech impairment, and required lower levels of intervention services. Children who retained their disability classification generally had either a learning disability or multiple disabilities.

The U. S. Office of Special Education conducted a study on how special education services influenced children as they grew into young adults. The study, which was conducted by Carol Trivette and Carl Dunst at the Orelena Hawks Puckett Institute, followed 700 children who received special education services in the 1970s and 1980s. Their study collected data on characteristics of the child and his or her family, the types of intervention services the child received, the child's participation at school, how the child and family functioned as the child progressed from elementary to high school, and finally, the child's educational and vocational successes after high school. Data presented from the study highlighted the achievements of the first 202 participants to complete the program. As more children move through the educational system and complete high school, their study results will be analyzed and added to this first wave of results (U.S. Office of Special Education Programs, 2003).

Participants in the study had cognitive delays that ranged from none to profound, with Down Syndrome, Cerebral Palsy, and mental disabilities as the most common disabilities. More than one-third of the students in this study entered the early intervention program during their first 12 months of life and remained in the program for an average of 29 months, although some children participated in the program for as long as four years. During their school years, children participated in a variety of educational settings that ranged from a non-educational program to a regular classroom without special services.

Parent expectations for their high school students ranged from supported employment, which included job coaching, transportation, assistive technology, and personal supervision, to college graduation. Results of the intervention program indicated that many of the students exceeded their parents' expectations. Thirty-four percent of the students earned a high school diploma, 12 percent obtained additional training after high school, and 8 percent obtained a college degree. Although more of these young adults were employed than their parents expected, fewer were competitively employed. Thirty-one percent of the participants had been employed at their jobs for more than five years, 73 percent worked 30 or more hours per week, and 23 percent considered themselves to be financially independent. Sixty-nine percent of the students still lived with their parents, but 25 percent have obtained a driver's license. Eighty-four percent of the participants reported that they had the services they needed, such as access to a dentist or physician. Following high school, study participants were active with their families and friends and were involved with a variety of community activities.

Two other studies currently in progress are the *Pre-Elementary Education*Longitudinal Study (PEELS), and the Special Education Elementary Longitudinal Study,
(SEELS). PEELS is funded by the U. S. Department of Education and is following
nationwide, more than 3,000 children ages 3 through 5 who receive special education
services. The children's educational success will be tracked as they progress through
preschool, transition into kindergarten, and move through elementary school.

Researchers were interested in determining the characteristics of children who received
preschool special education services, the types of programs and services the children
received, what their transitions between grade levels were like, how well they functioned

and performed throughout their school years, and ultimately, what educational, personal, and program characteristics were associated with greater success in school (Office of Special Education Programs, *Pre-Elementary Education Longitudinal Study*, 2002).

SEELS is a six-year study that is following a random sample of 14,000 students from more than 300 school districts across the nation. All students have been diagnosed with a disability. In 1999, when the study began, approximately 12,000 students were between the ages of 6 and 12. When the study is completed in 2005, these children will be between the ages of 12 and 18 and will be representative of school-age children across the nation. By documenting the school experiences of a national sample of school-age students with disabilities, researchers intended to look at the academic performances of the children, their school experiences, family life, social adjustments, and overall personal growth. The SEELS study is beneficial because children's progress will be evaluated over an elapsed period of time, thus providing a more in-depth profile of each child's growth and success.

Information from the study will help to improve schools by informing the U.S. Department of Education, the U.S. Congress, state policymakers, parents, and educators about what works well and ways to improve educational services to better meet the needs of students with disabilities (National Dissemination Center for Children with Disabilities, 2003, p. 1).

The studies discussed in this review highlight the merits and benefits of preschool special education programs, but how does one go about assessing the cost of these services? Assessing the true costs of early intervention programs was difficult due to the variability in programs, the needs of the children and their families, financial differences

such as teacher and therapist costs, the costs of building space, and the place where services were provided, for example at home, at school, or through a combination of both. There also were significant differences in the types and number of services provided, which was reflective of students who have developmental delays versus disabilities. Four program characteristics that influenced the cost of early intervention were: the duration of services; the intensity and quality of the program and services; the quantity of staff time and number of services devoted to each child; and the reliance on parents to absorb some of the costs. The ways in which service providers were paid also affected the efficiency of how their services were provided. Age and disability were two of the major determining factors when considering early intervention services. Some children with mild developmental delays or disabilities who began early intervention services at a young age may have required lower level services for a shorter period of time or may have no longer needed special assistance once they entered grade school, yet children with multiple or more significant disabilities usually required more intensive services for longer periods of time.

According to the U. S. Department of Education, Wood (1981):

Calculated the total cumulative costs to age 18 of special education services to a child beginning intervention at: (a) birth; (b) age 2; (c) age 6; and (d) age 6 with no eventual movement into regular education. She found that the total costs were actually less if begun at birth! Total cost of special education services begun at birth was \$37, 273, and total cost if begun at age 6 was between \$46, 816 and \$53,340. The cost is less when intervention is earlier because of the remediation and prevention of

developmental problems which would have required special services later in life. (p. 3)

The cost of providing early intervention services to preschool disabled children varied depending on the school district, the services provided, and the child's needs. The overall goal of any preschool special education program should be to provide the most appropriate educational services that addressed each child's individual needs.

A study conducted in Michigan found the average per pupil cost for a general education student was approximately \$6,200 per year, yet the cost of educating a special needs child was nearly \$18,000. Special education costs generally were higher due to the smaller class sizes, higher teacher-to-student ratio, and the need to have aides for special needs students placed in a general education setting (Michigan in Brief).

According to a 2004 National Education Association study, "The current average per student cost is \$7,552 and the average cost per special education student is an additional \$9,396, per student, or \$16,921" (National Education Association, 2004, p.1). The federal government committed to pay 40 percent of the average cost per special education student however, less than 20 percent of this money has actually been remunerated to school districts. Unfortunately, local taxpayers have become responsible for filling this financial gap. "This shortfall creates a burden on local communities and denies full opportunity to all students—with disabilities and without disabilities" (National Education Association, 2004, p.1).

During the 2002-2003 school year, 69 percent of Evesham Township's school revenues came from local taxpayers, while the state of New Jersey contributed 26 percent of the funding for students' education. The federal government contributed 2 percent of

the school district's revenue, and an additional 3 percent came from other sources. The average cost to educate a general education student in Evesham Township was \$9,519, compared to the state average of \$9,859. No statistics on the cost of educating a special needs student were available for this research study (New Jersey Department of Education, 2003).

Many special education children who were previously excluded from regular education programs have now been included in these classrooms because of IDEA's mandate for all children to receive a free and appropriate public school education in the least restrictive environment. According to the National Center for Education Statistics, in 1998-1999, 47.4 percent of disabled students participated in regular education programs for 80 percent or more of the school day. Approximately 28.4 percent of disabled students participated in a regular education program for 40 to 79 percent of their school day, and 20.1 percent of special needs students were in a regular education program for less than 40 percent of the school day. Of the more severely disabled students, 4.1 percent did not participate in a regular education program and were educated in a separate facility. Learning-disabled students were most frequently educated in a regular education classroom, whereas students who were deaf, blind, or had multiple disabilities tended to be educated in more highly specialized programs or separate school facilities.

A study conducted by the Archived Educational Placements of Students with Disabilities found that:

In 1992-93, 39.8 percent of students with disabilities age 6 through 21 were served in regular classroom placements under Part B and Chapter 1

(SOP). An additional 31.7 percent were served in resource rooms, and 23.5 percent were served in separate classes in regular school buildings. Fully 95 percent of students with disabilities were served in regular school buildings. Of those students served in separate facilities, 3.7 percent were in separate day schools for students with disabilities, 0.8 percent were served in residential facilities, and 0.5 percent were served in homebound/hospital settings. (p. 1)

Information from the *New York State Part B Annual Performance Report 2002-2003*, indicated that the "percentage of preschool students with disabilities declassified continues to increase, while school-age declassification remained the same" (New York State Department of Education, 2002-2003, p.1).

According to the New Jersey Department of Special Education, during 2002-2003, 13.5 percent of the children between the ages of 3 and 5 who were classified as having a disability or developmental delay attended a regular education preschool program, 54.4 percent were in a self-contained special education preschool program, and 11.1 percent of the children were placed in a general special education inclusion program. Of classified students between the ages of 6 and 21, 41.6 percent participated in a regular education program for more than 80 percent of their school day, approximately 30.3 percent of special education students participated in a regular education program between 40 and 80 percent of the school day, and 17.3 percent of special needs students were in a regular classroom for less than 40 percent of the day. Students who were educated in a separate public school comprised 3.6 percent of the special needs population, while 5.8 percent of

the students were instructed in a private day school (New Jersey Department of Education, 2003, Placement data).

During the 2003 school year in Evesham Township, 0.7 percent of classified children between the ages of 3 and 5 attended a regular education preschool program, and 73.5 percent received services in a self-contained preschool special education program. There were not any preschool age children who participated in an inclusive preschool program. However, 11.3 percent of the classified preschool age children received itinerant services at home, which may have included speech and or occupational therapy intervention. Approximately 13.9 percent of the preschool special needs students were placed in a separate private day school, and 0.7 percent of the children received services in a separate public school. For grade school age students, 53.9 percent of the special education students between the ages of 6 and 21 participated in a regular education program for more than 80 percent of the school day, 22.6 percent were in a regular education classroom for between 40 and 80 percent of the school day, and 19.5 percent of the special needs students were in a regular classroom for less than 40 percent of the day. Only 0.2 percent of the students were educated in a separate public school, and 3.6 percent attended a private day school. (New Jersey School Department of Education, Office of Special Education Programs, 2003 Placement Data).

According to Rolnick and Grunewald:

the quality of life for a child and the contributions the child makes to society as an adult can be tracked to the first few years of life. From birth until about 5 years old a child undergoes tremendous growth and change. If this period of life includes support for growth in cognition, language,

motor skills, adaptive skills and social-emotional functioning, the child is more likely to succeed in school and later contribute to society. However, without support during these early years, a child is more likely to drop out of school, receive welfare benefits and commit crime (March 2003, p. 3).

Researcher Dr. Mary Beth Bruder demonstrated that well-designed early intervention programs have been instrumental in providing a solid educational background for children with disabilities. She found that the best early childhood education programs met the needs of each child, and that teachers had high expectations for learning and success while providing activities and instruction at different developmental levels. Providing opportunities for self-guided exploration, play, and inquiry were necessary in order for children to develop higher-level problem solving and creative thinking skills. Utilizing developmentally appropriate learning opportunities and staying current with most recent research, teachers, parents, and professionals can work collaboratively to provide a comprehensive educational experience for all disabled children. Dr. Bruder also believed that producing naturalistic, nonintrusive learning situations, tailoring educational experiences to meet a child's needs, and embedding instruction into developmentally appropriate routines and practices, such as play, provided a systematic and responsive learning environment for all children (*Early Intervention for Children with Disabilities*).

The information throughout this review highlighted the long-term benefits and cost effectiveness of early intervention services for children with disabilities. Although no single program or intervention has been proven to be 100 percent effective for all children, the ways in which the programs and services were tailored to meet each child's unique needs was what made each program successful. Some children, by the nature of

their disabilities, may always require some type of special assistance during their school years and after graduation. However, for a majority of children with milder disabilities or delays, early intervention services may provide opportunities for participation in a regular education program, which may lead to a future of greater personal success and happiness (U.S. Department of Education).

Chapter 3

The Design of the Study

Research Design

This longitudinal cohort study was conducted to determine the effectiveness of preschool special education services in relation to future grade school placement. The sample population from this study included 342 children between 3 and 5 years of age who had been identified as having a developmental delay or disability and who attended Evesham Township's Preschool Disabled Program between 1990 and 2001.

Evesham Township did not provide preschool programming for non-disabled children between the ages of 3 and 5, therefore no control group was available for comparison. Children were eligible to enter Evesham Township's Preschool Disabled Program on the day of their third birthday, and their need for continued special education services was reevaluated yearly. Children were eligible to remain in the program until they began kindergarten. Educational and therapeutic services each child received while in the preschool disabled program were mandated by IDEA regulations and therefore could not be manipulated for this research study. Internal and external criticisms were established through parent, teacher, and Child Study Team member signatures on each child's IEP, which was a legally binding document. Signatures on the IEP indicated parent and school district agreement on grade school placement and the types of special education services that would be provided in order to meet the child's specific learning needs.

The independent variable for this study was participation in Evesham Township's Preschool Disabled Program. Although all preschool disabled children in Evesham Township are now serviced in one school building, for part of the 1993-1994 school year, one preschool class was housed in a different location, due to space availability. Over the past several years, the number of preschool disabled teachers and therapists has grown. Although the variability of teaching styles and instructional techniques may have increased, a common preschool curriculum has provided a measure of consistency in the educational materials and information being provided to students. The dependent variable of this study was the type of special education services required once the preschool children entered grade school.

Extraneous variables that may have had an impact on the results of this study were the 1997 changes to IDEA, the umbrella type of classification used for preschool disabled students, and the student's overall developmental growth and natural maturation of skills and abilities. Although a child's type and severity of disability can affect long-term educational placement, this information was not included in all preschool student records and could not be used to determine which students benefited the most from preschool special education. Therefore, hypothesis testing was used to determine the overall effectiveness of Evesham Township's Preschool Disabled Program by calculating the percentages of preschool students who were either declassified, received special education support in a regular education classroom, attended a self-contained special education program or required a more specialized out-of-district placement once they reached grade school age.

Focus On Research Instruments

In order to determine each former preschool disabled student's grade school placement as of November 2004, data for this research study was generated through the evaluation of primary source educational records for 342 students who participated in Evesham Township's Preschool Disabled Program between 1990 and 2001. Records that were evaluated included preschool class lists from 1990 to 2001, student IEP records, school district ASSA reports, and files on former preschool students who had moved out of the district or who had been declassified.

Sample and Sampling Technique

The comprehensive sampling design for this study included 342 students who were purposely chosen based on their participation in Evesham Township's Preschool Disabled Program between 1990 and 2001. Sampling bias was eliminated because all children who were enrolled in the preschool program between 1990 and 2001 were included in the study. Sampling error was not deemed significant because all preschool students were classified as preschool disabled, even though their actual disabilities and developmental delays varied. During the review of student records one specific type of disability or delay did not appear to be more prevalent over another. Students enrolled in the preschool program after 2001 were not included in this study because they were just entering grade school, and there was not yet enough information to determine long-term academic progress. Student names on preschool disabled class lists from 1991 to 2001, which were obtained from the Richard L. Rice Elementary School, provided a baseline for data gathering. Preschool student grade level placements as of November 2004 were

obtained from student records and school district special education reports. Student records and school district reports were evaluated to determine each child's current grade placement, whether the child still received special education services, and, if so, which type. This information was then analyzed to determine educational trends for Evesham Township's preschool disabled population.

Data Collection Approach

Data for this research study was obtained through non-interactive evaluation of existing school class lists, student records, and current Application for State School Aid (ASSA) reports. Data from preschool class lists dated between 1990 and 2001 provided a starting point regarding the names and approximate number of students who were to be included in the study. Once students were identified from the class lists, an updated ASSA report was generated from Evesham Township's special education database. Data items collected for this study included names of students who participated in the preschool disabled program between 1990 and 2001, their grade placement as of November 2004, and the type of special educational assistance these students were receiving, if any. In order to avoid duplication of student names, all information gathered was cross-referenced. If students were not included in the ASSA report, then their individual student record was evaluated in order to obtain the appropriate information needed for this study. Data analysis was initiated once all available information had been collected, organized, and coded.

Data Analysis Plan

Data and student information was collected and analyzed according to current grade placement and the types and levels of academic support being provided. The information was recorded on a spreadsheet that contained each student's name, his or her specific grade level classification, and the types of educational assistance that he or she required. Student totals and percentages for each grade placement category were then calculated and reviewed for validity and reliability. Data was evaluated for the entire preschool population and then similarities and differences between male and female grade level placements were delineated. Then information obtained from the entire data analysis for this study was explained in greater detail in Chapter 4: Research Findings.

The analyzed data was used to review the educational impact of preschool special education services on future academic success. Prior to this study, data that showed the educational progress of Evesham Township's preschool disabled students was not available; therefore an evaluation of the successes and drawbacks of the program could not be fully realized. The information gained from this study was used for planning purposes in order to determine the future direction of the preschool disabled program and to plan professional development opportunities.

Taxes in Evesham Township have increased significantly over the past several years and local residents have become frustrated with the school expenditures for special education programs. The information presented in this study also was used to highlight the benefits and cost effectiveness of beginning special education intervention as early as possible.

Chapter 4

Research Findings

The focus of this research study was to determine the impact of early childhood special education on grade school placement for students who participated in Evesham Township's Preschool Disabled Program between 1990 and 2001. Based on a review of recent research and literature, three hypotheses were developed. First, that at least 25 percent of Evesham Township's preschool disabled students were declassified and no longer required special education during their grade school years. Second, that at least 50 percent of the preschool disabled students participated in a regular education classroom while receiving either in-class support or pull-out replacement special education services. Third, that less than 25 percent of preschool disabled students required either a selfcontained special education program or an out-of-district placement during grade school. According to the data obtained from this research study, one of the three hypothesis parameters was supported. A greater percentage of students than hypothesized were declassified, and a smaller percentage of students than expected received in-class support or pull-out replacement special education services in a regular education classroom. Slightly more students than predicted required either a self-contained special education program or a more specialized out-of-district program.

The hierarchy of educational support services available to students from least to most restrictive included a declassified status, in which a child was fully included in a regular education program without any additional academic assistance. Level R1 services, which included in-class support, allowed a child to participate in a regular education program and receive academic assistance in the classroom from a special education teacher for less than 21 percent of the school day. Level R2 services, which included both in-class support and pull-out replacement services, allowed a child to participate in a regular education program and receive academic assistance from a special education teacher either in the classroom or in a small group setting outside of the regular classroom for between 21 to 60 percent of the school day. In a self-contained special education program, a child with more significant educational needs received all of his or her academic instruction from a special education teacher in a separate classroom environment. An out-of district special education placement was reserved for a child who had significant educational needs that could not be met within the school district.

A total of 342 students, 254 males and 88 females, participated in Evesham

Township's Preschool Disabled Program between 1990 and 2001. As of November 2004,
108 of the preschool students had been declassified and were participating without
special education assistance in regular education programs. Sixty former preschoolers
remained classified as eligible for special education services at the R1 level. Forty-three
former preschool disabled students received R2 level special education services in the
regular education classroom, and 69 preschool students had educational needs significant
enough to require a self-contained educational placement. Twenty-two students required
an out-of-district program placement, 29 students moved from the school district when
they were still preschool age, and for ten students, no grade school records or information
were found. One student remained classified and received periodic academic monitoring

by a special education teacher, but did not require any other educational assistance. In sum, almost two thirds of the preschool disabled students participated in a regular education program once they reached grade school age, and only one third required a full-time special education placement. Table 1 shows the percentages of preschool disabled students in each grade school educational program.

Table 1

Percentages of Preschool Students in Grade Level Placements

Placement	Percentage of Enrollment	
Declassified	31.58%	
R1 ·	17.54%	
R2	12.57%	
Self-Contained	20.18%	
Out-of District	6.43%	
Moved	8.48%	
No Records	2.92%	

Seventy-four percent of the students who participated in the preschool disabled program were males and 25 percent were females. An almost equal percentage of males and females were declassified once they reached grade school age, yet a higher percentage of males than females participated in a regular education program at the R1 and R2 level. A slightly higher percentage of males than females required a self-contained special education placement, and approximately the same percentage of males and females required an out-of-district program placement. Table 2 shows the

percentages of preschool disabled males and females in each grade school educational program placement.

Table 2

Grade Placement Percentages for Preschool Males and Females

Placement	Males	Females
Declassified	31.10%	32.95%
R1	18.11%	15.91%
R2	13.39%	10.23%
Self-Contained	20.47%	19.32%
Out-of District	6.30%	6.82%

The majority of former preschool students classified as R1 received in-class academic support, and the most common subjects where instructional assistance was provided in order of frequency, were language arts, math, and social studies. A few students at the R1 level received a combination of in-class support and pull-out replacement assistance, and only one student received assistance through pull-out replacement services only. All students who received monitoring were classified at the R1 level.

During grade school, most of the preschool students at the R2 level received academic assistance through pull-out replacement instruction. Assistance with language arts and math were needed most frequently, followed by social studies, science, and organizational skills. A few students received academic assistance through a combination of in-class support and pull-out replacement instruction. Out of the 25 students who received aided instruction, 10 students were classified at the R1 level, and 15 students

were at the R2 level. Table 3 describes the most common types of grade school academic assistance.

Table 3

Types of Grade School Academic Assistance

Placement	No Instructional Assistance	Aided Instruction	In-Class Support	Pull-Out Replacement	Full-time Special Ed. Instruction
Declassified	X				·
R1	X	X	X		
R2		X	X	X	
Self-Containe	ed .				X
Out-of Distric	et				X

Data from this research study indicated that preschool students received a variety of special education services and instructional assistance when placed in a regular education grade school program. As a whole, the data can be viewed as: one third of the students were declassified and did not require any further special education intervention during their grade school years, another third of the preschool population participated in a regular education program but still required some type of special academic assistance, and one third of the preschool students had needs that necessitated a full-time special education placement.

Chapter 5

Conclusions, Implications and Further Study

Conclusions

The purpose of this study was to review and analyze the grade school placements of children who received preschool special education services in order to determine how this type of early intervention impacted future learning. Data gathering for this project involved the review of preschool class lists, school district ASSA reports, and IEP records of children who participated in Evesham Township's Preschool Disabled Program between 1991 and 2001. Information obtained from the review of these reports and student records was then used to determine each preschool student's current grade school placement and his or her need for continued special education services.

Results of this study supported one of the three hypotheses. More students than expected were declassified once they reached grade school age. Slightly fewer students participated in a regular education classroom with additional in-class support or pull-out replacement instructional assistance, and more students than expected required a self-contained or out-of-district educational placement. Although the results of this study did not exactly coincide with the hypothesized grade school placements, finding that 108 of the 342 students who participated in the preschool program no longer required special education assistance during their grade school years was considered to be significant because this information supported data from similar research studies.

When combining the number of students at the R1 and R2 levels, 104 students remained classified in grade school and received additional special education assistance in a regular education program. The focus of inclusion and educating children in the least restrictive environment allowed these students to interact with their less-disabled and typically developing peers while still affording academic support to ensure success. During grade school, 91 students who participated in the preschool disabled program still had educational needs significant enough to require a self-contained or out-of-district program placement. Due to the nature of some disabilities and developmental delays, higher levels of instructional assistance may always be necessary for children with more significant educational needs. Students were not included in the grade placement count if they moved out of district or if their grade school records could not be found.

The results of this study were analogous to the findings of Markowitz and Larson's study conducted in Montgomery County, Maryland. Although their study included approximately twice as many students and was more comprehensive, the data from both studies was similar. All children in this study, and in Markowitz and Larson's, benefited from early intervention services. Results from both studies also indicated that following early childhood special educational intervention, many children with less severe disabilities and delays functioned on the same social, emotional, and academic levels as their typically developing peers. Like the students in Markowitz and Larson's study, a similar percentage of Evesham Township's preschool disabled students participated in a regular education program. Both studies also indicated that although children with more severe delays and disabilities benefited from early intervention services, their overall

educational progress still tended to lag behind their less-disabled peers, thus the continued need for more highly specialized educational program opportunities.

Karnes' research involving 86 mildly to moderately disabled preschool-age children indicated that 80 percent of the children included in that study were placed in a regular education kindergarten program. Forty percent of the students received support services and 15 percent of the students were retained in preschool. Data for Evesham Township's preschool disabled students reflected a more even grade placement distribution.

Approximately one third of the preschool students were declassified, one third of the students participated in a regular education program with special education support, and one third of the students were in a self-contained special educational program at the grade school level. As was found in the Karnes study, students in Evesham Township's Preschool Disabled Program also benefited from early childhood special education services, yet none of Evesham Township's students were retained in preschool.

Comparable results also existed between data obtained from this study and from Raber's, which evaluated the educational progress of 620 children who were identified as having a disability either during preschool or kindergarten. Both studies supported the idea that children who received early intervention services performed better educationally, and children with more significant delays tended to retain their special education classification for longer periods of time. Children who received early intervention services tended to require less special education assistance during grade school, and through these early intervention services, children who may have been excluded from regular education programs were now being educated with their typically developing peers in a less restrictive academic environment.

Some noted inconsistencies between this study and other research findings were that occasionally specific grade placement data and information was not always available for some children's baseline academic levels of functioning at the time of initial classification. Post intervention skill level information also was not available for some students. For many of the more recent student records pre and post-intervention information was available, but in some of the past student records, this material was either not evident or did not yield any useable data. Markowitz and Karnes categorized students by specific disability. In New Jersey, however, all children between the ages of 3 and 5 years old who had a disability or developmental delay were classified as preschool disabled, regardless of their actual disability. Having only one preschool-age disability classification for this project did not allow for a more detailed assessment regarding which types of children benefited the most and least from early special education services. Therefore, a definitive conclusion regarding academic growth that occurred specifically during the preschool years could not be reached.

The percentages of Evesham Township's preschool students in the different grade school placements were similar to, but did not exactly mirror other research findings.

These differences were due to several factors such as the variability of student needs, the manner in which each school district's program was administered, the availability of financial and professional resources, and most importantly, the unique cultural needs and beliefs of each school community. Research findings presented in the Literature Review provided a general perspective of academic results achieved through different early childhood intervention programs. However, this information was not intended to be a sole

means of measure regarding the success of Evesham Township's Preschool Disabled Program.

The limitations of this study included a small sample size of 342 children who attended Evesham Township's Preschool Disabled Program between 1990 and 2001. No control group was available because all children from birth to 5 years old who were diagnosed with a developmental delay or disability were entitled to early intervention services, and Evesham Township's Preschool Disabled Program served only children with developmental delays or disabilities. The overall results of this study were deemed to be positive, and were reflective of findings in similar research studies. However, without a control group, the full educational impact of Evesham Township's Preschool Disabled Program services could not be realized.

Due to recent changes in IDEA regulations, Evesham Township's preschool students could not be tracked according to a specific disability category because IDEA's new disability standards were somewhat different from the old criteria. Students who may have been classified in one disability grouping under the old guidelines may now be classified under a different category according to the new regulations. This type of disability information indicated on the student's records could not be changed for this study.

Implications

Results of this study indicated that providing early childhood special education services to Evesham Township's preschool disabled students had a positive effect on their educational progress. This study highlighted not only the percentage of preschool disabled students who did not require special education assistance once they entered

grade school, but also the percentage of students who, with special education assistance, participated in a regular education program. Since two thirds of the preschool disabled students participated in a regular education grade school program fewer special education support services were required, thus allowing the school district to utilize these professional resources in other ways.

Even though no immediate program changes were effected by this research study, data gained from this report provided Evesham Township's administrators and teachers with valuable baseline information on the long-term impact of early childhood special education services. Data obtained from this research study was used to re-evaluate the existing preschool curriculum and assessment system, policies and procedures, and to plan new program goals and objectives designed to promote the educability of all children. Knowledge gained from this study also was used as a tool for planning professional development opportunities in order to continue to provide a safe and supportive learning environment for all students.

Tracking this cohort of preschool disabled students provided valid and reliable data on educational progress of the group as a whole. Since the findings of this study reflected other similar research studies, two deductions were made. First those students who participated in Evesham Township's Preschool Disabled Program tended to perform similarly to preschool disabled students in other school districts. Second, that the long-term impact of early intervention services was cost effective from a financial and student achievement perspective.

Leadership Growth

Leadership skills gained throughout this research study included the ability to communicate and collaborate with a variety of educational professionals and staff members, and the ability to assess student learning and success from a long-term perspective. Reflective practice was used to evaluate the effectiveness of Evesham Township's preschool special education program and how this service might be improved or modified to better meet student, parent, and community needs. After reviewing literature and research data, organization and judgment skills were used to reach logical conclusions on the impact of and relationship between preschool special education and future academic learning. Based on these conclusions and by utilizing knowledge of student development and effective teaching practices, additional professional development opportunities were considered.

According to Standard 1, "A school administrator is an educational leader who promotes the success of all students by facilitating the development, articulation, implementation and stewardship of a vision that is shared and communicated by the school community" (Ubben, Hughes, & Norris, 2001, p. 392). Data obtained from this research study was used to re-evaluate the existing preschool curriculum and assessment system, policies and procedures, and to plan new program goals and objectives designed to promote the educability of all children.

Standard 2 describes school administrators as educational leaders who promote "the success of all students by advocating, nurturing and sustaining a school culture and instructional program conducive to student learning and staff professional growth" (Ubben, Hughes, & Norris, 2001, p. 393). This study highlighted the percentage of

preschool disabled students who required fewer special education services once they entered grade school. Information and data generated from this study was used as a tool for planning professional development opportunities in order to continue to provide a safe and supportive learning environment.

According to Standard 3, "A school administrator is an educational leader who promotes the success of all students by ensuring management of the organization, operations, and resources for a safe, efficient, and effective learning environment" (Ubben, Hughes, & Norris, 2001, p. 394). Data obtained from this research study provided the Evesham Township School District with specific information on the academic program placements of preschool disabled students once they reached grade school. Knowledge of student development, teaching practices, and academic learning allowed teachers and administrators to collaborate and share in the decision-making process regarding the future direction of the preschool program.

Standard 4 describes school administrators as leaders who promote "the success of all students by collaborating with families and community members, responding to diverse community interests and needs, and mobilizing community resources" (Ubben, Hughes, & Norris, 2001, p. 395). In an effort to continue to foster positive school-community relationships, the results obtained from this study were communicated to parents and community members in order to demonstrate the benefits of addressing the needs of special education students at an early age.

Describing a school administrator as an "educational leader who promotes the success of all students by acting with integrity, fairness and in an ethical manner" (Ubben, Hughes, & Norris, 2001, p. 396) is the focus of Standard 5. This research study involved

collaboration and communication among a variety of educational professionals who have significant interest and concern for the social, emotional, and academic progress of all children in the school district. Data generated from this study highlighted the percentage of preschool disabled students who did not require special education assistance once they entered grade school.

According to Standard 6, "A school administrator is an educational leader who promotes the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context" (Ubben, Hughes, & Norris, 2001, p. 397). Information gathered during this study provided baseline data on the academic success of children who participated in Evesham Township's Preschool Disabled Program. This information also reinforced the positive effects that early intervention services had on all children in the school district. Although the preschool students were the direct beneficiaries of the special educational services, the community as a whole benefited as well.

Organization Change

The information obtained from this study was shared with administrators, teachers, and therapists involved with Evesham Township's Preschool Disabled Program in order to evaluate the success of the preschool program and to focus on continued student learning. During a time with ever-rising taxes and accountability for educational success, parents and community members often were unaware of the significant but subtle impact special education services had on disabled and non-disabled children and the community. Often when finances have become an issue, the disabled child has been viewed as more of a burden than a collective responsibility, and there were few concrete ways to

demonstrate the success, importance, and benefits of special education programs and initiatives. Since a child's growth and development is ongoing, there is no way to guarantee uniform success of all students. Sometimes, when looking at a group as a whole, the underlying success of an intervention process may not be acutely evident.

When considering the educational progress of Evesham Township's preschool disabled student population, the benefits of early childhood special education were clear. Approximately two thirds, or 61.52 percent, of the students who participated in Evesham Township's Preschool Disabled Program between 1990 and 2001 attended a regular education grade school program and required less special education assistance than they had during their preschool years. Although a cost analysis of educating preschool disabled and grade school age special education students in Evesham Township was not available for this study, research by Wood, Rolnick and Grunewald, and Shonkoff and Meisels, demonstrated that the long-term cost effectiveness of preschool special education services outweighed the short-term expenses.

The results of this study were specific to the Evesham Township School District yet were also similar to the results of other published research studies. However, the data obtained during this study did not necessarily generalize to preschool disabled programs in other school districts due to differences such as school district professional and financial resources, program designs, community support, and the variability of students with special needs. Knowledge gained from this study may be a useful resource for parents, community members, and educational professionals in other school districts when exploring the long-term educational effectiveness of preschool special education

services. Possible program changes may eventually include typically developing peers and a greater variety of therapy service options.

Although the findings of this study only partially supported the research hypotheses, they reflected information presented in the Literature Review, which highlighted findings by other researchers, that preschool special education programs have a positive impact on the long-term academic progress of children with disabilities. Educating a greater number of special needs students in a less restrictive school environment has afforded Evesham Township's disabled and non-disabled children greater opportunities for personal and educational success that might not have been achieved in a more segregated school environment. Although there were students whose educational needs required a self-contained classroom environment, this too was viewed positively because these children were still provided with opportunities that challenged them to reach higher personal and academic goals. The ways in which these challenges were presented and achieved, however, was somewhat different than in a general education setting.

Given that no one educational method or mold will fit all children, providing intensive and specialized educational programming for preschool children with developmental delays or disabilities has been shown to be cost effective and has improved the quality of many children's lives. Research by Trivette and Dunst highlighted the positive influences special education services had on children as they grew into adulthood, and research by Rolnick and Grunewald (2003) indicated that the quality of a child's life could be tracked to the first few years of his or her existence. The results of this research study demonstrated that Evesham Township's Preschool Disabled Program has had a positive and lasting impact on student success and academic achievement for a significant number

of children. Many children with developmental delays or disabilities have reaped the benefits of early intervention and now are able to participate in a regular education program. Although no educational program can guarantee uniform success for all learners, this and other research studies have demonstrated the merits of preschool special education intervention.

Further Study

Two initial implications for further study included repeating this project with the addition of a control group of non-disabled preschool-age peers, and repeating the same project with a control group and a group of preschool disabled students who attended a preschool inclusion program with typically developing peers. By having different student cohorts participate in a variety of educational settings, more conclusive results could be drawn regarding the long-term impact of preschool special education on grade school placement. Valuable information regarding the strengths and weaknesses of each specific type of educational program could be outlined and used to focus curriculum and instruction to student needs more closely.

Tracking students by age and disability as they entered the preschool disabled program would be another way of assessing the impact of early special education assistance. Also, evaluating the educational progress of children who entered the preschool program at age 3, versus age 4, would yield additional information that could more specifically guide the educational and therapeutic focus of the preschool curriculum and program services.

Another implication for further study would be to compare grade school standardized test scores of former preschool disabled students against their same-age, typically

developing peers. Test scores for preschool students who were declassified could be compared with test scores for children who did not receive special education assistance. Test scores for preschool students who required special education assistance in grade school could be compared with peers who received similar academic assistance but did not participate in the preschool disabled program. These methods of test score comparison would provide a valid objective measure of academic achievement that could be followed over time and could be used to determine if gains made through the preschool program were stable or eventually leveled off over time.

A final option for further study might include providing parents with training and resources on how to assist in educating their special needs child. Scholastic progress from a control group of parents who did not receive academic training could be compared with the scholastic progress of students whose parents had received educational training. The information gained from this comparison would yield valuable information regarding the importance of a family's social, emotional, and educational support during the preschool years.

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