

INCLUSION FOR OPTIMAL LEARNING EXPERIENCES FOR STUDENTS WITH
SPECIAL NEEDS

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ABSTRACT

Current research shows that including students with developmental delays in regular education classrooms benefits students with developmental delays and students in the general education population, both academically and socially. Teachers agree that inclusion is a beneficial practice for the academic and social success of students with developmental delays and students in the general education population. However, while teachers agree with the idea of including students with developmental delays in general education classrooms, those in the general education field are not eager to participate in the inclusion practice. The primary reason given for this reluctance to include students with developmental delays is lack of training. This paper will examine the literature around how the practice of inclusion is best used to create an optimal learning experience for students with cognitive delays in public education. Findings suggest that teacher training in working with students with developmental delays, coupled with high levels of collaboration and building support, create a successful learning environment for all students.

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CHAPTER ONE: INTRODUCTION

Introduction

This paper will examine the literature around how the practice of inclusion is best used to create an optimal learning experience for students with cognitive delays in kindergarten through sixth grade. This chapter explains the perceived value of inclusive practice with respect to all students, gives historical perspective surrounding inclusion of children with special needs in general education classrooms, and addresses the controversy associated with inclusive practice.

Chapter two will critically examine the empirical literature regarding actual educator and community attitudes toward inclusion, levels of academic success experienced by children with cognitive delays educated in both inclusive environments and self-contained classrooms, and the teaching practices that led to academic success for these children. The final chapter will interpret the results of the literature, summarizing the effects of inclusion on academic success of students with special needs, and it will make recommendations for practice and further study.

Rationale

Although law requires that students with special needs have access to regular education curriculum and that they be educated in the least restrictive environment, legal words and educational practices do not always meet. Too often, students with special needs are presumed to be unable to achieve academic success, and the focus of their education becomes simply life skills.

While learning life skills is important and useful, the curriculum is limiting. Students with special needs are far more capable than they are seen to be. According to Lev Vygotsky, learning is an inherently interactive and social process. He believed that a person's relationship with her community helped her achieve higher mental functions. His theory of the Zone of Proximal Development suggests that, working along with a more capable other, a person is able to learn at a higher level than would be possible learning alone, thus invoking the community in achieving higher mental functions for its members (Miller, 2011). Research shows that students with special needs do better academically and socially when educated in a general education setting than when educated in a non-inclusive environment. (Baker, Wang, & Walberg, 1994/1995) Students in the general education population provide peer role-modeling for academic, social and behavioral skills. Students with special needs show increased achievement of IEP goals and enhanced skill acquisition and generalization, having had greater access to the general education curriculum. Higher expectations that are embedded in the ideal inclusion model contribute to the greater achievement of students with special needs, as well as continuing to have higher expectations for them. Inclusion in public schools sets the stage for increased inclusion in future environments and greater opportunities for interactions outside of school for the students with special needs. Additional positive impacts are felt socially. Friendships are formed between both sets of students, there are increased social initiations, and relationships and networks of friends grow.

Students in the regular education classrooms also benefit academically from having students with special needs in their classrooms. They enjoy opportunities for mastery in academic disciplines and skills when they practice by teaching the students with special needs, and so enjoy greater academic success. They develop and practice empathy and leadership, they accept and understand the different roles that different participants in communities play, and they learn to accept and value differences. They also experience growth in their social cognition and self-concept (Glyman, 2010). These skills and habits of mind prepare them for an adult life in a diverse and inclusive society.

There is no research that shows any negative effects on either population of students from inclusion done appropriately with the necessary supports and services for students to actively participate and achieve IEP goals (Kids Together.org, 2010)

The impact on students with or without special needs is not the only positive effect of using inclusion practices. There is the opportunity for significant positive impact for school staff. Because of the nature of inclusion practices in education, there is a need for, and thus an increase in, staff collaboration. In order to accommodate more diverse educational and social needs in a classroom, teachers are encouraged to use less mechanistic methods of instruction. There will be less whole-class teacher-centered instruction and more cooperative and collaborative activity, less student passivity and more active learning, less classroom time devoted to worksheets, workbooks and other seatwork and more experimental and hands-on learning. Enacting and modeling

the principles of democracy in school and focusing on students' academic growth will reduce the stress and competitive practices embodied in the nature of grading systems. And one of the most negatively impactful practices—pull-out special programs—will be reduced or revised, and more of the necessary help for the student with special needs will be delivered in the general education classroom (Glyman, 2010).

Parent participation is also enhanced, and families are more integrated into, rather than excluded from the community. “Excluding people from the community, requiring them to enter segregated facilities to meet their needs, as opposed to meeting their needs in the community, reduces the individual's quality of life, as well as the overall quality of the community as a whole. Expanding each person's circle of friends, supports and connections, enhances their quality of life and enhances their capability to contribute to society using their abilities.” (Kids Together.org, 2010) Each member of the community has unique needs and each member of the community has unique contributions to make. The sum of those unique needs and contributions is a rich, strong community fabric.

Historical Background

Prior to 1950, children with special needs generally were not educated, but instead were often institutionalized. Though special education programs were available in public school districts in the 1950s, they were segregated and isolated, not providing for or meeting all the educational needs of the students,

and they only served some students. More than a million students were still excluded, and many more did not receive appropriate services.

Starting in 1973 with the Rehabilitation Act and its amendments of 1986 and 1992, employment and educational rights of people with disabilities were guaranteed from institutions receiving federal funding (Torreno, 2011). Then, with the passage of the Individuals with Disabilities Education Act (IDEA), all school districts were required to develop and provide a free, appropriate public education for all children. IDEA required that education be provided for each child in the least restrictive environment for that child. This meant that students with disabilities should be taught in neighborhood schools in general education classes (Torreno, 2011). In 1997 IDEA was reauthorized and it specifically called for involving students with special needs in all aspects of general education (Kids Together.org, 2010). The No Child Left Behind legislation took effect in 2002, and it reinforced the idea that students with special needs should not be segregated; rather, these students must be given appropriate strategies and accommodations to access their learning, thereby effectively legislating inclusion (Torreno, 2011).

At the present time, legislation requires that students receive a free and appropriate education, and for students with special needs, an additional requirement of being educated in a least restrictive environment (LRE) applies. How these terms are defined is one source of controversy. Many teachers believe students with special needs should be educated with other students with special needs in self-contained classrooms. The arguments for this perspective

are that the special needs can best be addressed in a self-contained setting, and that the student with special needs will disrupt and negatively impact the teacher and other students in a general education classroom. The argument for including students with special needs in regular education settings rests on the belief that all students benefit from the inclusion of students with special needs.

Definition of Terms

In order for a reader to understand the educational context of special education relative to general education, certain terms and language need to be defined. This section is intended to provide an understanding of terms specific to special education, so the reader may better understand this paper.

An IEP (Individualized Education Program) is a document that is developed for each child in public school who is eligible for special education. It addresses current abilities, sets goals and includes an action plan.

Elementary refers to grades kindergarten through sixth grade.

The term *inclusion* refers to the educational belief that children with special needs deserve to have the same education as their peers in the general education classroom. The requisite evidence of progress need only be that they are not losing out from placement in the general education setting, not necessarily making any significant gains. There is more emphasis placed on life skills and social skills than on acquisition of age appropriate academic skills.

A *self-contained* educational setting is a classroom located within a regular education school, where a full-day or mostly full-day class or program is provided for children with disabilities. These settings are usually populated by children in the same categorical groupings who cannot be appropriately educated in a regular classroom. These classrooms are characterized by highly individualized, closely supervised specialized instruction.

Resource room refers to a program that provides instruction, materials, and support services to students identified with disabilities who are assigned to a general education classroom for more than 50% of their school day.

Least Restrictive Environment (LRE) is the placement of a student with special needs in a manner promoting the maximum possible interaction with general school population. Placement options are offered on a continuum, including regular classrooms with no support services, a regular classroom with support services, and self-contained classrooms with limited participation in the regular education setting, special instruction services, and private special education programs.

As referred to in this paper, *life skills* refers to a blend of academic, daily living, personal, social and occupational skills taught to students with special needs in order that they learn to function independently in society.

Mainstreaming is a term used to describe the integration of children with special needs into regular classrooms for part or all of the school day. The

concept is based on the belief that a student with special needs may benefit from being in a general education classroom, both academically and socially.

Mainstreamed students may have slight adjustments in how they are assessed, but they generally learn from the same material as the students already placed in general education, and mainstreamed students must show that they are making progress in that setting.

School Action (SA) is a British term referring to placement for students with special needs within a general education setting. In this setting, the teacher will be looking for ways to support them in class and will work with the SENCO (Special Education Needs Coordinator) to find ways to support the child's learning. Parents of these children must be informed that their children are considered to have special education needs (SEN) and have been placed at school action level. Parents will receive copies of the schools plans. Progress should be reviewed at least twice a year and IEPs should be written for these children.

School Action Plus ("SA+") is used where SA has not been able to help the child make adequate progress. At SA+ the school will seek external advice from the Local Education Authority's (LEA's) support services, the local Health Authority or from Social Services. As well as the use of external services, SA+ requires more detailed planning of

interventions for children whose progress has been limited. A child's progress at SA+ stage should also be reviewed regularly (i.e. at least twice a year) and an IEP should also be written to assist the child.

SEN stands for special education needs and is the British designation for what we call student with special needs in the US.

As defined by the Washington State Office of the Superintendent of Public Instruction, students with special needs who qualify for special education in Washington State are evaluated against the following criteria and must meet all three: they must have one or more disabilities, those disabilities must adversely affect educational performance, and those students' unique needs must be such that they cannot be addressed through education in a general education classroom alone. The student requires specially designed instruction. (Office of the Superintendent of Public Instruction, Washington State, 2009)

Limitations

This study will focus on elementary students with special needs in the United States using studies conducted in the United States as well as internationally conducted studies for comparison. It will also include longitudinal studies, including follow-up studies of older students and adults who were studied as children, to understand the outcomes over time from differences in educational settings.

Statement of Purpose

This paper explores how the educational placement for students with special needs affects their educational growth. Federal law requires that all students be educated in the least restrictive environment, but that term is broad and open to interpretation. The broad language allows for interpretation and tailoring to individual needs, but it also adds to the complexity of an already controversial issue. The least restrictive environment per student is unique to individual needs. Often, parents and schools have conflicting ideas about what that looks like for each student. The school has expertise in education, adequate yearly progress goals to meet, and a budget to keep, all conditions playing a role in any placement decision. Parents of students with special needs have varied preferences for the educational placement of their children, and school personnel may or may not agree with those preferences. Parents typically fall in two very different camps about what least restrictive environment and so what appropriate placement for their child should be. One common viewpoint held by parents of students with special needs, is that of avoiding social stigma and accessing the general education curriculum at all costs. For those parents, typically full inclusion is their preference, or demand. This placement is expensive for districts as it often requires a paraprofessional to accompany said child as a one-on-one assistant. It also can cause dissent among parents of students with no special needs, in the form of concern about a teacher's ability to adequately address the general education population when students with special needs are included in a general education setting. These concerns must also be addressed by the

administration. Another common viewpoint held by parents of students with special needs is that of focusing on life skills and keeping them with their developmentally similar peers. For those parents, inclusion is a frightening placement for their children and they may prefer a self-contained setting. Schools still have the burden of extra cost associated with special needs education, even in the self-contained setting. Because these entities often have conflicting ideas for the placement of students with special needs, it is important to examine the efficacy and outcome of different educational placements for all students, to inform these decisions and best educate each child. A balance must be struck where all students' educational needs are being met, not at the expense of other students, and not creating undue financial burden for the school district.

Summary

Over the past sixty years, education of children with special needs has changed dramatically. It has gone from essentially no education at all, to ideas about full integration of students with all levels of disability into general education settings. Any educational placement on that broad spectrum has always and continues to invite controversy due to the complex considerations of the best learning environment for all students, and the numerous parties having input into those decisions. For teachers and administrators, there are additional legal requirements to be met, as well as different costs associated with different placements, adding to the complexity of appropriately placing students with special needs. This issue offers continuous controversy, and carries immediacy

for teachers, administrators, parents and students. Decisions about student placement need to be made in a timely manner.

Because educational placement decisions carry such weight, it is important to understand the affects of different educational placements of students with special needs, and to determine a set of best practices for the best educational outcome for all students. Chapter two examines literature regarding educational outcome based on placement. Within the examination of educational outcomes, attitude of all persons involved toward inclusive placement of students with special needs is considered, as well as what practices create successful outcomes.

CHAPTER 2: CRITICAL REVIEW OF THE LITERATURE

Introduction

The previous chapter outlined a brief history of how children with special needs have been served in public education. It also provided a brief description of the controversy surrounding the practice of including these students in general education classrooms as the setting for their public education in compliance with the federal laws regarding least restrictive environment.

This chapter reviews literature regarding actual educator and community attitudes toward inclusion, levels of academic and social success experienced by children with cognitive delays educated in both inclusive environments and self-contained classrooms, and the teaching practices that led to academic success for these children. This chapter is divided into three main sections: (1) the social and academic effects of inclusion on students with special needs, (2) educative practices resulting in success of inclusion, and (3) attitudes of general education teachers regarding inclusion. The beginning of each major section will contain a brief overview of the research addressing that aspect of inclusion.

The first section outlines the academic and social effects of placing students with special needs in inclusion settings, and compares these to the academic and social effects when students with special needs are placed in self-contained classrooms.

Overall Effect of Inclusion Settings on the Academic and Social Success of Students with Special Needs

The following ten studies examine the effects on the academic and social success of students with special needs, when placed in an inclusive general education setting.

Ryndak, Morrison, and Sommerstein (1999) conducted a longitudinal study to determine the difference in literacy growth in a before/after scenario where a student was in a self-contained classroom and was then moved to an inclusion classroom with nondisabled peers. A fifteen-year-old female cognitively disabled child of a middle-class Caucasian family of four was the sole participant in this qualitative study. This child had been receiving special education services in self-contained classes since she began school at age five.

This student was observed for several days across all her school settings, at home with her family, and in the community, with detailed field notes taken. Reviews of her educational records were completed for the previous two years, including test scores and narrative reports, records of meetings, and conversations with school personnel. Formal interviews were conducted individually with each of her service providers, their supervisors, the building principal, and district director of special education. Audiotaped and transcribed conversations with the student and her parents occurred almost daily for a four-month period, and formal individual interviews were conducted with each of her parents. Samples of her work across content areas were collected. For six years, observations occurred annually, and there were conversations with her every two

weeks, as well as collection of work samples. Additional interviews were conducted with her brother addressing information from both before and after inclusion. The student was videotaped while making public presentations. Member-checks of formal interview content were completed. Researchers triangulated in the verification of notes and content, and a literacy development researcher completed a formal miscue analysis.

This student experienced a dramatic growth in literacy following her change in educational setting. This growth may have been due to increased exposure to meaningful literacy artifacts and activities used for instructional purposes in a general education setting; simply placing her in general education situations with nondisabled peers immediately had an effect on her use of language. While the findings appear to correlate directly with her placement, she was the only participant in the study, and no other variables were considered, so the transferability of the results is not definitive.

Ryndak, Ward, Alper, Montgomery, and Storch (2010) completed a qualitative, longitudinal study of the same female child and a male child in who began in the same setting as her. These two individuals had significant disabilities and were ultimately educated in different settings, so the study was to determine how the setting contributed to their functioning across settings over time.

Participants were selected using purposeful sampling because of their common experiences at different times in their lives. During Year 1 of this study, observations were conducted of the self-contained special education class in

which they were both students. At that time the first student, a female, was 15 years of age and was labeled as having cognitive disabilities or multiple disabilities, although school and district personnel consistently described her as having "severe disabilities." She was reading at a 2nd grade first month, using math at a third grade level, and using speech that was intelligible only to people who were familiar to her during interactions that frequently were inappropriate. The second student, a male, was 16 years of age and was labeled as having cognitive disabilities, although school and district personnel described him as having "mild to moderate disabilities." He was reading at a second grade level, using math at a third grade level, and using speech that was intelligible to all peers and adults during frequent and appropriate interactions. Ten years later, both students met again as adults. At that time, both were receiving support through the Medicaid waiver program. They and their parents or legal guardians were approached to determine whether they would be interested in participating in a study about: (a) the participants' educational experiences and performance during those experiences, (b) the participants' lives immediately after exiting school services, and (c) the participants' current lives.

Records were collected from two years prior to both students being placed in the same self-contained special education class during Year 1 of this study, at the age of 15 and 16 years, respectively. The female student's earlier records indicated that for the previous two years she had been in self-contained special education classes. Her records after Year 1 indicated that her placement changed and she was included in general education classes, with supports and

services, for the remainder of her educational experiences up through age 21. The male student's earlier records indicated that for the two years prior to Year 1 he had received services in self-contained special education classes. His records after Year 1 indicated that he remained in self-contained special education classes through the remainder of his educational career, until age 22. In addition to determining their educational placement, the participants' records and artifacts were collected for analysis related to performance levels in academic content, functional activities, interactions with others, and overall behavior. Second, interviews were conducted with the participants, their families and, when possible, their current service providers. For the purposes of this study, only interviews conducted with school personnel related to the performances of all students in the self-contained special education class were used from Year 1. After these two students met again as adults interviews were conducted with them and their parents and legal guardians, related to their services and performance levels over time. Both retrospective and current information was requested. Interviews were also conducted with their current Medicaid-waiver personnel who provided support in their independent living situations and community access.

Observations were conducted on multiple days, across multiple contexts, across two weeks. After each observation when multiple observers were present, the observers finished their independent notes and then discussed what they had observed. The observers then returned to their independent notes and made additional comments when appropriate. Trustworthiness was addressed via

collaborative efforts amongst all the researchers involved in this study in relation to both content analysis and triangulation.

Both students were in the same self-contained classroom at the beginning of this study. The female student was described as the lowest functioning student in the class, and one whose behaviors were immature and inappropriate. Following the first year, she was educated in an inclusive mainstream setting. During her last year in educational services, she was writing articles for her school newspaper, and auditing college level classes. Her speech was intelligible; she had a well developed social and support network. In most settings, her activities and participation level were comparable to those of her peers. Her physical appearance and manner had lost some characteristics sometimes associated with long-term experiences within self-contained classrooms; she walked with good posture and showed confidence in her manner.

At the beginning of this study, the male student was described as undistinguishable from his peers in appearance. He was the highest performing student in the self-contained class, described as the model learner; one whom parents of children with disabilities wanted their own children to be like. He remained in a self-contained setting for the remaining six years of his education. In his last year of receiving educational services, he had increased his reading level from second grade, sixth month (2.6) to third grade, first month (3.1), and his math level from 3.9 to 4.6. He had very poor self-esteem and suffered from

depression, he was fearful of making mistakes, and he demonstrated a lot of anxiety when doing assignments and interacting in the community.

Two years after the students left the public school, the female student was living on her own, having returned from out-of-state college, and, with some assistance, she was holding a job and living independently. However, at that same time, the male student was living with his parents and had been fired from many food-service jobs. He had no friends or acquaintances, and he had become distinguishable from others as an adult with special needs. At this time, he began sharing an apartment with the female, where he began to change dramatically. He began initiating interactions with members of her network, and he began participating in and sharing worldly experiences with her.

This study conducted a direct comparison of the life paths and longitudinal outcomes of inclusive and self-contained education for these two students. The findings suggest that providing special education in inclusive general education settings may lead to better outcomes for students with significant disabilities when compared with outcomes for students served in self-contained special education settings. However, the sample size was very small, and the study did not consider many variables, such as ethnicity and geographic location, so without corroboration of other research, the findings are not generalizable.

A quantitative study conducted by Carter, Moss, Hoffman, Chung, and Sisco (2011) examined the effect on students with severe disabilities of peer support compared with support from paraprofessionals. To perform this study, participants were recruited from a metropolitan high school serving more than

2,000 students. Approximately 1.0% of the student population was identified as Native American, 10.9% were Asian American, 16.1% were African American, 13.1% were Hispanic, and 58.8% were European American. Almost one third of students were eligible for free/reduced price meals. The school had a reputation for inclusive practices and high-quality, community-based programming. The study took place in two classrooms across three different class periods.

Three high school students with severe disabilities participated in this study. To be included in this study, students (a) had to be enrolled in high school, (b) had to be receiving special education services under the category of intellectual disabilities or autism, (c) had to be enrolled in at least one general education class and receive ongoing support from a paraprofessional, and (d) had to provide consent and parental consent to participate. All of the participants had individualized education program (IEP) goals focusing on improving social interactions with peers without disabilities

One participant was a 16-year-old African American male with an intellectual disability and traumatic brain injury. He was in the 11th grade. He participated in general education classes where he received support from individually assigned paraprofessionals for approximately one fourth of the school day. His annual IEP goals addressed academics as well as strengthening receptive and expressive language skills. Another participant was a 16-year-old African American female who was enrolled in the 11th grade and received special education services under the category of intellectual disability. According to her IEP, she had social-related goals which included making eye contact,

orienting her body, and slowing down her speech while interacting with peers. The last participant was an 18-year-old European American male with an intellectual disability in the 12th grade. His social-related IEP goals included initiating interactions with peers and taking conversation turns appropriately.

Selection of the students in regular education as peer support for these participants was done by teachers who were asked to nominate students who may already have an interest in developing friendship with the focal student or who might benefit from being a peer partner. The classes in the study had 32 students and one paraprofessional.

The intervention in this study was replacing paraprofessional assistants for these students with chronological peers. To evaluate the effectiveness of the intervention, they employed a multiple-baseline design across participants. Given the primary focus on increasing peer interaction, phase change decisions were based on peer-related social outcome data. To determine efficacy, intervention implementation was staggered across students.

Mean, level, and trend changes in social interaction outcomes were examined when peer support strategies were introduced. In addition, academic engagement, social support behaviors, and contextual variables were compared across conditions. Prior to introducing the intervention, to determine baseline conditions, observations of typical classroom activities were conducted. During the baseline condition, all three students with disabilities received one-to-one support from their paraprofessionals. Students sat in close proximity to a paraprofessional who assumed primary responsibility for supporting their

participation in ongoing class activities. Peer partners and other classmates without disabilities were intermittently in proximity to the focal students during this phase. Students with disabilities and these students' peers were informally observed by the interventionist in each class before the intervention began. Partial-interval recording was used (30 s observe, 30 s record) to document students' social interactions and momentary time sampling (1 min) to document academic engagement and collect information about the classroom context. Observational measures were drawn from previous classroom-based studies involving students with severe disabilities.

Three graduate students in the areas of special education, school psychology, and social work served as classroom observers. All observers had prior research experience conducting classroom observations, but were not blind to the purpose of the study. Prior to data collection, observers read and discussed coding definitions and data-collection procedures. Live observations were conducted two to four times per week over a 10-week period starting seven weeks into the fall semester. Inter-observer agreement (IOA) was assessed across all study conditions for all participants during 25% of observations. A second observer simultaneously but independently observed and recorded data. Point-by-point agreement was calculated by dividing the number of agreements by the number of agreements-plus-disagreements and multiplying by 100%.

For all three participant students, the mean percentage of intervals containing social interaction with peers increased immediately and substantially upon introduction of the intervention. During the baseline observation, the

percentage of intervals during which the participants interacted with other students in his classroom ranged from 1.6% to 7.7%. During the intervention phase, the interactions increased to between 53.3% and 88.2%. Upon introducing the intervention, the mean percentage of interactions increased to 29.8% (range, 6.1%-57.1%).

Findings from this study extend the literature on peer-mediated interventions and inclusive education. Students with severe disabilities experienced immediate and pronounced increases in social interaction with other students when peer-support arrangements were introduced within each classroom. The post intervention interviews conducted with multiple stakeholders, including the participating students, suggested that the peer support package was considered feasible and appropriate to the classroom environment. This study found that measures of academic engagement remained largely unchanged as a result of the intervention, but the findings from this study do provide strengthened support for the acceptability and feasibility of peer-mediated interventions for social growth. The sample size of this study is very small, and could be considered a weakness; however the construction of the study, as well as the analysis of the data was thorough, mitigating the weakness of the small sample size. Multiple contextual variables were accounted for in the construction of the study and in the analysis of the data, and inter-observer reliability was established. Multiple domains were also studied, and analyzed for correlation. The social growth of the participants in this investigation is a similar

result to those in other studies, suggesting generalizability when considered together.

Rujis, Peetsma, and Van der Veen (2010) investigated the achievement of students with special needs being educated in inclusive settings to determine if there was an effect on their achievement when more students with special needs were also in the class. In this quantitative study, 1839 students with a wide range of special needs participated. This group was a sample from a larger study.

In order to determine if students with special needs were affected in inclusive settings by the presence of other students with special needs, and if different needs were affected differently, the categories of need were considered. Students' special needs were categorized as follows: cognitive problems, behavior problems, and the catch-all category of other problems, with students often falling into more than one category.

Academic functioning of these students was assessed using the standard testing of the district, and they were standardized according to year in school. Student and teacher reports from the larger study were used to determine socio-emotional functioning of the participants in the sample group. The socio-emotional functioning measured for three aspects of functioning: self-confidence in school work, wellbeing at school, and social integration in the class.

To investigate whether the achievement and socio-emotional functioning of children with special needs was related to the presence of other children with special needs, multi-level regression analyses were used. In the analyses, three

levels were distinguished: school level, class level and student level. Separate stepwise analyses with Maximum Likelihood estimation were carried out for all 9 dependent variables (language and arithmetic, teacher-reported self-confidence, teacher– student relationship, effort, popularity, well-being and behavior, and student-reported self-confidence, well-being and social integration). The data from the children was then divided into three groups: one group contained data for children who were the only students with special needs in their class ($n = 471$); one group contained data for children in classes with a few (up to 10%) other students with special needs ($n = 625$, $M\% = 6.23\%$, $SD\% = 2.13$, $Mn = 1.26$, $SDn = 0.49$); and one group contained data for children in classes with more (more than 10%) other students with special needs ($n = 743$, $M\% = 18.11\%$, $SD\% = 8.43$, $Mn = 2.75$, $SDn = 1.57$). In the analyses, Rujis et al. (2010) investigated whether there were differences between these three groups of children with special needs. To determine if there were differences between these groups of students with special needs, five models were computed. The first model, numbered Model 0, was a reference model. In Model 1, five background variables were added to the reference model; in Model 2, the students with special needs were added. For each of the three categories of problems (cognitive problems, behavioral problems and other problems), there was a dichotomous variable, and students without that specific type of problem were the reference group. Model 3 added the variable of the number of students with special needs in the class. Here, children in classes with no other students with special needs were the reference group. Finally, in Model 4, the interaction-

effect between type of special needs and the number of other students with special needs was added. A χ^2 value was calculated for each model to test whether the model differed significantly from the previous one.

This study found that there were no academic differences found between students with special needs who were included singularly in general education classes were compared to those included with other students with special needs, and it did not matter what categories of special needs the children fit into.

The results for socio-emotional functioning were significant, however. For four variables of socio-emotional functioning, some differences were found. When considering interactions with type of special needs categories, researchers found two differences. First, students with special needs in classes with a few other students with special needs scored lower on wellbeing and behavior than students who were the only student with special needs in their inclusive class. Second, a similar result was found for self-reported self-confidence: students with behavioral or cognitive problems in classes with a few other students with special needs scored lower on self-reported self-confidence than those who were the only student with special needs in the regular education class. This strong study relied on a previous study with a sample size of over 50,000 participants over two years, and both studies accounted for and analyzed multiple external variables. The study also separated and examined multiple aspects and categories of special needs individually and used a multi-level regression analysis of the data to account for potential dependent variables. The results of this study indicate that it is socially beneficial to be the only student with special needs in a

classroom. The social growth attributable to inclusion in general education further supports findings from other studies, strengthening the generalizability of findings.

In a quantitative study, Campbell (2010) used an application of the theory of planned behavior to examine the impact of classroom inclusion on elementary school students. Using an exploratory analytic design in a quantitative study, Campbell examined the perceptions of nondisabled fourth- and fifth-grade students and their relationships to peers with disabilities. These perceptions were reported by the students through a paper and pencil survey. Campbell also surveyed teachers and parents.

Researchers conducted written interviews with 46 teachers from March to April of 2007. Parents and students filled out survey booklets for the research, and of the 936 surveys dispersed, 593 were returned, a response rate of 63.4%.

The participants in this study were from a convenience sample of 937 students from across two counties in Florida. The schools used four different service models for educating students with special needs, in third, fourth and fifth grades. Fifty-two of the classrooms were from Orange County (n=31) and Seminole County (n=21). Most students in the sample were in fourth and fifth grades where the school populations consisted of female (53.6%) and male (46.4%), Caucasian (58.4%) and ethnically diverse (41.2%), who attended schools with diverse populations.

Overall, the data suggests that either full- or part-time inclusion is statistically significant in positive impact on the intent of students in the general

education population to include students with disabilities in social contexts, regardless of other influencing factors such as socio-economic differences. The study used a convenience sample in a limited geographic area, and did not verify or validate any data, weakening the transferability of the conclusions on the basis of this study alone. However, the findings are similar to other research findings, negating the weaknesses of the study in transferability.

Weiner and Tardif (2004) conducted a quantitative study comparing the overall social and emotional functioning of children with learning disabilities whose special education placement varied in level of inclusivity. The participants in the study were 117 children with learning disabilities (67 boys and 50 girls) in Grades 4-8, whose mean age was 11.63 years. The students were from nine different schools in two different suburban school districts. All students were identified as having significant discrepancies between their educational achievement and their IQ scores.

The research assessed the social and emotional functioning by conducting questionnaires and interviews over a two-year period. First peer acceptance was assessed using a five-point sociometric rating scale by class, using at least 15 raters per class. Interviews about friendships as well as questionnaires about friendships were used to determine the number and identity of friends of the participants. Participants' parents were given telephone interviews parallel to the friendship interviews of the peers, and teachers were given parallel questionnaires with similar questions as on the peer questionnaires.

A Friendship Quality Questionnaire—Revised (FQQ-R) with 40 questions and a five-point rating scale was used for this study. The scale had a factor structure of 9 with seven of the 35 intercorrelations having values above .50. The questionnaire that participants filled out to determine their feelings of loneliness or social dissatisfaction also used a five-point scale, as did the questionnaire determining depression levels of participants, and the questionnaire measuring self-esteem. Teachers were given a scale to rate participant social skills and problem behaviors. In order to mitigate concerns about missing differences in placement groups, a MANOVA strategy was used, followed by a univariate analysis, for the purpose of identifying differences between placement groups.

Specifically, Weiner and Tardif (2010) found that students receiving in-class support in more inclusive settings were more socially accepted by their peers than students receiving resource-room support, and the inclusion-classroom participants reported higher academic self-image than those in resource settings. Friendship quality was also positively impacted for the students in the inclusive settings as well. Unlike the lesser social acceptance of students in resource rooms by the students with special needs already included in general education classrooms, no differences in social acceptance were found between students with special needs who came from self-contained settings and those already in inclusion settings. Teachers rated students with in-class support as having fewer behavior problems than those in either resource room or self-contained settings. This study shows a positive correlation between inclusive, in-

class support of students with learning disabilities, and their self-esteem and self-perception.

This study was well constructed, using a large sample size, and a process of identifying participants that selected identical characteristics regardless of setting. The analysis used, a matrix finding Eigen values correlating nine factors, exposed results which would have otherwise have remained uncovered. Because of the strength of the study, the findings of positive social impact of in-class support of students with special needs are generalizable.

In a qualitative study, Frederickson, Simmonds, Evans, and Soulsby (2007) examined social and affective outcomes across different groups of students including students with special needs and students with no special needs. Evans et al. were interested to know if social and affective outcomes differ across the following different groups of pupils: included pupils (formerly enrolled in special schools); mainstream pupils who have special educational needs; and mainstream pupils who do not have special educational needs.

A total of 397 children, aged eight to 11 years, from 14 different classes in 11 different mainstream schools, participated in the study. Each of the 14 classes contained one former special-school pupil (SEN); a student who had a statement of special educational needs and had formerly attended a self-contained school full-time but was currently included in mainstream with support from the outreach program. (A statement of educational needs is the British equivalent of an IEP, and this group is equivalent to students in the US who receive resource support.) All of these included students had been educated with their mainstream

classes full-time for at least 18 months prior to the start of the study, and the average length of time included in mainstream was 28.75 months. For 12 of the pupils, the designated primary special need was autistic spectrum disorder; of the remaining pupils one had a language disorder and the other global delay.

Across the 14 classes there were, in addition, 89 pupils who were on their schools' special needs registers (pupils with special educational needs). The percentage breakdown of primary type of special educational needs experienced by these pupils was as follows: cognition and learning, 63% (56); behavior, emotional and social, including attention deficit hyperactivity disorder, 24 % (21); language and communication, including ASD, 9% (8); and physical and sensory, 4% (4). Also enrolled in these classes were 294 pupils who were not recorded as having special educational needs, referred to as typically developing (Group C). The gender composition of the three groups differed markedly, with females comprising 49% of the typically developing group, but only 37% of the school-defined special educational needs group and 21% of the former special school group.

The overall proportion of pupils known to be eligible for free school meals was 14.5% of pupils in nursery and primary schools. However, the proportion of pupils known to be eligible for free school meals differed across groups, being substantially higher in both groups of pupils with special needs than in the typically developing group.

The research consisted of questionnaires filled out by the students and administered by a researcher in the presence of the classroom teacher. The data

were also analyzed for gender differences and interactions between genders and need group. In each case, two-way (needs group and gender) between-groups analyses of variance were carried out. Where multiple analyses were carried out, and where a significant difference was found between the needs groups on a measure, follow-up tests were carried out to find out which of the groups differed significantly. A post-hoc Tukey's test was used as a follow-up test to keep a consistent high criterion for accepting that differences between groups were likely to be trustworthy and unlikely to be due to chance. Throughout these analyses, no gender differences or interactions between gender and needs group were found to be significant.

In terms of social acceptance and rejection, significant differences were found between groups of students with different degrees of special needs. In the areas of work and play, the special educational needs group (SA-similar to students who are placed in resource in the US) was less accepted and more rejected than both the group of typically developing students and the students with special needs (the more severely impacted students with greater need) that had been previously attended a special school. The percentage of students with special needs in the rejected category is approximately four times that of typically developing students in the work area, and twice as high in the area of play. This trend held true for the category of social behavior and bullying as well. The social-emotional outcome for students does differ between groups, in particular between the typically developing students and the students with special needs who had not been at the special school, suggesting a familiarity and pre-

established relationships between the more dramatically affected groups. The student groups more familiar with each other and educated together for a longer period of time, had relationships and dynamics which were established before this study began. Whatever manner was used to introduce them to the mainstream setting may have differed from the way the new, more severely impacted students were introduced. Perception of exists between the SA students and typically developing students that they are not very different from each other, and do not have truly special needs but they are annoying, and it does not inspire the level of caring as does the perception that the more significantly impacted students from the special school have greater need. The most dramatically affected students were those who were already at the school in the SA program.

This is a strong study with consideration to the sample size, and consideration of gender and socioeconomic variables, as well as the data-collection procedures. Researchers applied Bonferroni Correction to ascertain significance of data was not due to chance. The data can be generalized with confidence.

In a qualitative, sociometric study, Smoot (2011) investigated the social effectiveness of the mainstreaming model in classes in the local rural school systems where pre-service special education teachers were working in an extended practicum. This experience was mentored by host teachers of self-contained classes of students with mild intellectual disability (MID).

The 61 participant students with MID in this study were selected as a sample of convenience from the host teachers' classrooms. Only students who attended at least one period per day in a general education setting were chosen. Students were from five different school systems in rural areas, including two high schools, five middle schools, one elementary school and one Headstart preschool. The total population of the schools in this study was 18,112; the student population was 43% European American, 55% African American, and 2% other minorities, and the free/reduced lunch percentages ranged from 34%-59%. The students with MID included 25 high school students (11 boys and 14 girls), 24 middle school students (14 boys and 10 girls), and 12 elementary and Headstart students (8 boys and 4 girls).

The 25 pre-service teachers in a single cohort majoring in special education were placed with the host teachers where they collected the data. Prior to placement, these pre-service teachers were instructed in the concept of sociometry and its application in education. Questionnaires and sociogram drawings were completed by each participant, and the data recorded in a spreadsheet, which was then analyzed using Statistical Program for the Social Sciences (SPSS) software. The questionnaires and sociogram drawings were used to determine, in two constructed social situations, which students would be chosen to associate with, given the selection of participant students with MID and general education students. Pre-service teachers were chosen to participate in this study because educators claim a lack of preparation for successfully including students with special needs into their regular education classrooms. In

this type of study, the researcher proposes a hypothetical or real social situation and asks each participant to write down the names of persons in the classroom with whom they would like to do this social activity (Cook, Drennan, & Drennan, 1997). For example, a teacher might say to the students, "We are going on a field trip, please write down the names of three people that you would like to sit next to on the bus." Sometimes participants are asked to name, in addition, some persons that they would not like to associate with. The researcher verifies the results by repeating the procedure describing a different social situation. In this specific study, Smoot found that overall, students without MID were chosen twice as often, with middle school students choosing students with MID least frequently as friends, compared to high school and elementary school. The results were statistically significant, $\chi^2(2, N = 347) = 6.01, p = .06$; only 43% of students with MID were named as a friend of those interviewed from the general education group.

This study did not determine the reason for the choices made, so the results can only be speculatively interpreted to mean that students in a general education population have a level of discomfort with association with students with mild intellectual disabilities. The lack of member-checks and validation of the subjective data, as well as using a sample of convenience from only a rural setting, suggest that the findings are limited in their transferability.

The impact of inclusion education on academic achievement, student behavior, self-esteem, and parental attitudes was studied by Daniel and King (1997). To better understand the research, the following terms are defined:

The designation *random inclusion* follows the "principle of natural proportion" (Stainback et al., 1992, p. 13) and is labeled as such because students with special needs are randomly assigned across all classrooms.

The term *Clustered Inclusion* classrooms are classrooms where educators at several of the schools in the present study placed students with special needs in only a selected number of classrooms at a given grade level, leaving other classrooms at the same grade level with few, if any, students with special needs. This strategy results in a large cluster of students with special needs in the inclusion classrooms, so we referred to it as clustered inclusion.

A *Non inclusion* classroom, often referred to as integration, or mainstreaming, involves placing students with special needs (e.g., learning disabled, mentally handicapped) in separate classrooms for part of the day and in regular classroom settings for another part of the school day. Students identified as gifted also receive services through mainstreaming. Because this method does not involve full-time inclusion of the student in the regular classroom, it is referred to as non inclusion.

Through a quantitative study, Daniel and King examined the following two questions:

- To what extent does student placement in random inclusion, clustered inclusion, and non-inclusion classrooms affect student achievement, self-perceived self-esteem, and teacher-reported instances of students' problem behaviors?

- To what extent do parents' perceptions of their children's problem behaviors and parents' levels of concern with the school program differ across placement of their children in random inclusion, clustered inclusion and non-inclusion classrooms?

Participants in the sample were 207 third- through fifth-grade students from intact classrooms (classrooms that had been formed according to criteria established by educators at the given schools). The 207 students, both typically developing and those with special needs, were clustered into three groups according to type of classroom in which they were placed. Group 1 included 68 students from four non-inclusion classrooms; Group 2 included 34 students from two clustered-inclusion classrooms; Group 3 contained 105 students from six random-inclusion classrooms.

The study was conducted using a quasi-experimental design, with four variables. The first variable was defined as parental concerns about their children's school program as determined by a score on a 22-item attitudinal questionnaire developed for this study. The second variable was teacher- and parent-reported instances of student problem behaviors using subscales of the Achenbach's Children's Behavior Checklist. The third variable was student academic performance on the SAT, and the final variable was student self-reported self-esteem using the Self-Esteem Index.

Analysis from the third-grade groups yielded data indicating a statistically significant difference in the performance of students in both the random inclusion and non-inclusion classrooms. The students in the fourth-grade cohort displayed

similar results. In the third-grade group, data indicated that students in inclusion classrooms achieved greater gains in reading than their peers in non-inclusion classrooms, but they also had more behavior problems and lower levels of self-esteem than those same peers. Fourth-grade students in the non-inclusion classroom showed greater gain in mathematics scores and higher peer popularity and self-esteem than did students in the inclusion settings. For fifth-grade students, there were fewer behavior problems in the random-inclusion classrooms. Data across all three grade levels indicated more behavior problems, lower achievement and lower student-perceived self-esteem for all students in cluster-inclusion classrooms when compared to those in random-inclusion classrooms.

The data collected about parental concerns indicate differences between the parents of students in inclusion settings and those parents of children in non-inclusion settings. Parents of students in inclusion-model classrooms reported their children having behavior problems; they also expressed concern about the effectiveness of the school program. Less concern about the school program and fewer reports of behavior problems were expressed by the parents of students in non-inclusion classrooms.

The study found mixed results with no clear conclusion regarding the effects of inclusion of students with special needs in the general education population. The sample size was large enough to produce statistically significant results and the analysis of variables followed established protocols. However, the number of variables in the study made it difficult to determine the effect of any

one of them, and a more focused study of some of the variables is needed to produce generalizable conclusion.

Lane, Wehby, Little, and Cooley (2005) were interested to know if academic and behavioral progress of students with special needs was a function of the setting in which they learned. Lane et al. conducted a quantitative study with an experimental design of a 2 x 2 (Placement x Time) model, which produced an interaction of placement and time where there were two main variables for placement (self-contained classroom and self-contained school) and two levels of time (year onset and year end). Student progress over the course of the academic year was monitored with a series of repeated-measures ANOVAs, with time as the repeated-measure factor and placement as the between-subjects factor. A one-way ANOVA was also conducted using year-end scores minus year-onset scores. The F-values in both measures were exactly the same.

Participants were evaluated at the onset and at the end of the academic year using the Woodcock-Johnson III Test of Achievement for academic measures, and the Social Skills Rating System (SSRS) for measuring social and behavioral performances. The SSRS contains three subscales: social skills, problem behaviors, and academic competence, each of which is rated on a three-point Likert-type scale. In addition, Boning's Multiple Skills Series: Reading was also administered to students twice a month during the academic year to assess reading comprehension skills.

The study included 60 participants, 41 males and 19 females, who were receiving special education services in either self-contained classrooms on

general education campuses ($n=26$), or in a self-contained school ($n=34$), in a southern metropolitan public school district. Of the students participating in the study, 55% ($n=33$) were in grades kindergarten through fifth grade, 45% ($n=33$) were in grades six through eight. The majority of the participants had a primary handicapping condition of emotionally disturbed ($n=42$, 70%), with the remaining students having primary labels of learning disability ($n=8$, 13.33%), other health impaired with ADHD ($n=6$, 10%) or not specified ($n=2$, 3.33%), mild mental retardation ($n=1$, 1.67%) and language ($n=1$, 1.67%). The majority of the participants were also African American ($n=45$, 75%) with the remaining students being European American ($n = 13$, 21.67%) and Hispanic ($n = 2$, 3.33%). There were no significant differences in mean intellectual ability between groups.

Data indicated no significant difference in growth for students in reading comprehension in either setting, $F(1, 58) = 3.49$, $p = 0.0667$. There was, however, a significant difference shown in the results of Oral Language and Reading Comprehension favoring the students educated in the self-contained school. Results suggested the opposite for growth in Broad Written Language scores, $F(1, 58) = 7.17$, $p = 0.0096$, which indicated that students in the self-contained school experienced significant decreases in written language as compared to those students in the self-contained classrooms. Socially and behaviorally, students showed significant decreases in both scores when students were in a self-contained school, $F(1, 58) = 0.59$, $p = 0.4440$; $F(1, 58) = 1.53$, $p = 0.2204$ (effect size = 0.34); , $F(1, 58) = 0.04$, $p = 0.8518$ (effect size = 0.05).

Collectively, these findings suggest that students with significant Emotional Behavior Disorders (EBD) made little progress when not in a self-contained school, and in some areas fell further behind in all three domains, academic, social and behavioral. While the study used empirically validated tools and procedures and inter-rater reliability testing, the sample size was too small from a limited geographic area, and only two placement settings were investigated, so the results are not generalizable.

This section demonstrated that social growth and achievement of students with special needs is generally positively impacted when they are educated in an inclusive setting. There is also evidence of social benefit for students in the general education population. The academic results are more mixed, and appear dependent on the specific setting. The next section will explore specific settings and practices where positive academic and social impact of inclusion is demonstrated in students with special needs.

What Does Successful Inclusion Practice Look Like?

Students with Special Needs

The ten studies in this section examine classrooms experiencing successful results educating students with special needs in inclusive classrooms. This examination identifies common teacher and building practices that contribute to successful inclusion models.

Wallace, Anderson, and Bartholomay (2002) investigated communication and collaboration practices that demonstrated success at including students with disabilities in general education and which resulted in exemplary outcomes for all

students. The four schools for the Beacons of Excellence research Wallace et al. identified had already participated in the survey and focus groups. The school sites varied in terms of size, per-pupil expenditure, and percentage of students receiving special education and other services, as well as the percentage of students qualifying for free or reduced lunch. These sites also differed in terms of the racial and ethnic composition of their student populations. All Beacons of Excellence schools had high rates of inclusion of students with disabilities in general education classrooms and high rates of graduation for all students, regardless of the unique demographic profiles of each school.

One school was located in Franklin, Tennessee, a suburb of Nashville. Services for students with disabilities at this school were based on student Individual Educational Plan (IEP), team efforts, and support provided within a high-standards, general education setting. This school joined the High Schools that Work program in 1993, increasing expectations for all students. Additionally, the school created a block schedule to increase instructional flexibility and teacher collaboration, as well as narrowing the curriculum to various accelerated and advanced academic courses. Self-contained special education classes were reduced and a new resource program was implemented to support students with special needs in the general education population.

Out of 191 students with disabilities, only 10 attended one additional special education class. Special education teachers served students through shared teaching models, and one teacher monitored the performance of each student for the duration of the student's high school career. All students were

expected to participate in school-level testing, and students with disabilities were offered accommodations as specified in their IEPs.

The second school was in the urban and rural area surrounding Flagstaff, Arizona. Students with disabilities at this high school were primarily served through the general education program with a resource room for remedial support and a strong emphasis on IEPs. Students with disabilities succeeded in the general education setting through services that were based on individual attention, close monitoring, and one-on-one support as needed. Although special education teachers co-taught in the general education setting, much of their success with students with disabilities was attributed to their individualized attention to students. Self-determination was emphasized within the school's IEP process, where students were encouraged to lead their IEP teams and articulate their needs. Student achievement was closely monitored and immediate action was taken to address causes.

At the third site, a high school in Brooklyn, New York, services for students with disabilities were composed of four components. First, as is a common standard, IEP teams developed plans that supported the needs of students with an emphasis on placing students in supportive but least-restrictive settings. Second, special education self-contained classes existed as another level of student service, and all students with disabilities took a self-contained support class as a base class through which they received focused training in study skills, organizational skills, and academic remediation. The third component of service was the Integrated Settings Program, composed of classes that include students

with and without disabilities. These classes were supported by two or more adults, combining general education teachers with special education teachers and/or paraprofessionals. At the time of the study, there were more than 31 Integrated Settings classes including 91% of the students with disabilities. The fourth level of support for students with disabilities was an expectation that they would participate in general education activities. All students were expected to take and pass a required graduation exam, with accommodations specified by IEP teams implemented for students with disabilities.

The fourth school was a technical arts high school located in Miami, Florida. The school was founded on the philosophy of the Coalition of Essential Schools, which views teachers as coaches and students as workers. Education here was described as a two-for-one opportunity. Students were offered an academic diploma and a practical, career-oriented skills certificate.

At each school, interviews were conducted with principals ($n = 7$), superintendents ($n = 4$), and coordinators of special education ($n = 3$; not included was one special education coordinator). One state director of special education was interviewed. Focus groups were also conducted with each school's existing school advisory group ($n = 39$), student advisory group ($n = 40$), and groups of special education teachers ($n = 34$), general education teachers ($n = 40$), and community members ($n = 40$). The participants of the latter three groups were selected by each school's administration for their high level of active participation in, and knowledge of, the school. A survey was completed individually via the Internet by staff at each site.

The schools were selected from a field of 114 schools nominated for the project due to their success, including the involvement and satisfaction of parents. Sites were also selected to include rural, urban and suburban environments. A total of 15 interviews of administrative personnel were conducted, as well as 20 focus groups of teachers, community members, and advisory groups. The size of the each focus group ranged from 8-10 individuals.

The first strategy for collecting data was a semi-structured interview or focus-group protocol used across all sites, seeking information in the area of school results, educational processes, faculty and staff, inclusion, collaboration, and community and family involvement. All individuals and groups were asked the same core questions relating to staff collaboration.

The Baldrige Education Criteria for Performance Excellence was used as the conceptual framework for this study. The validity of the Wallace et al. (2002) research findings was member-checked by the principal and coordinators of special education services for each building. The member-checks did not result in any changes to the results of the investigation.

The second data-collection strategy used in this study included a project-derived survey for special education teachers. The survey was designed to collect information regarding the teaching practices, instructional supports, and communication and collaboration practices of teachers in schools considered successful at including students with disabilities in general education classrooms at the secondary level.

The Cronbach alpha reliability coefficients for the survey responses within specific scales associated with topics relevant to this investigation are as follows: Coefficients for related scales according to survey type are $r = .8376$ for the scale addressing the type of activities that special educators perform in the general education setting, and $r = .8469$ for the scale addressing the type of support that special educators provide general educators.

The survey items varied in design. Some items required the respondent to make a selection from a Likert 5-point scale indicating their level of agreement to a stem, while other items provided a list of response categories that the respondent could use to complete the stem.

According to Wallace et al. (2002), the communication and collaboration practices found to demonstrate success at including students with disabilities in general education and achieving exemplary outcomes for all students were block scheduling, collaboration, joint professional opportunities, and most importantly, a school-wide culture of staff commitment that all teachers and staff serve all students. All of the schools studied had a culture of regarding every student as every person's responsibility to educate, mentor and nurture. The professionals recognized that communication and collaboration were key attitudes and practices for creating that culture, as well as generally for success and best education of all students. They also recognized that communication and collaboration alone were not enough, but that professional education and development as a cohort rather than as departments, was necessary and contributed to the success of the communication and collaborative elements of

their building models. Finally, the block scheduling allowed all students to be learning the same general material at the same time, so those students being pulled out for extra help, were receiving help in a subject that was being taught at the same time throughout the building so as not to miss out on key instructional time in a different subject.

The results of this study were member-checked, and the sample contained a targeted yet varied geographic, ethnic and socioeconomic composition, making this a strong study. The common practices of collaboration made them the Beacon of Excellence schools, which is why they were chosen. Because of the broad range of demographics and the common successes, this study is generalizable.

Farrell, Dyson, Polat, Hutcheson and Gallannaugh (2007) examined student achievement of students with special needs in mainstream inclusive settings, and the practices in place that resulted in student achievement in those settings. In this qualitative study, researchers identified and worked in sixteen schools which represented a range of geographical and socioeconomic contexts and also had a high proportion of students with special needs. Of these schools, twelve reflected a general high level of achievement, and four of them had a below-average level of achievement. Data collected came from school documentation, focus studies of students, informal classroom observations, informal observation of out-of-class school life, interviews with teachers in different capacities (head teachers, those with special education responsibilities,

content leaders, classroom teachers, teaching assistants and learning support), other interviews, and questionnaires.

Multilevel modeling of the data displayed the relationship between student attainment and school inclusivity, using the defining student characteristics of gender, ethnicity, FSM entitlement, and special needs status. School inclusivity was used as the independent variable.

Schools exhibiting successful student attainment using inclusive settings shared principal elements. They all had a welcoming, positive ethos and environment and a strong achievement orientation. The practice of inclusion was presumed to be a good practice everywhere, with staff accepting the task of educating students with special needs as part of their normal responsibilities, exemplifying the commitment to the principle of inclusion. These schools used a range of strategies for raising achievement, of which flexibility played a significant role.

These results can be considered transferable based on the strength of the study. The sample size was large and the demographics varied, the data was analyzed using multi-level modeling for comparison of factors, data was collected from a broad range of contexts, and the resulting achievement in all settings shared a common practice and value of inclusion.

In a longitudinal, qualitative study, Eisenman, Pleet, and McGinley (2010) investigated what factors affect school implementation and development of a collaborative-consultation model of inclusive education. These researchers chose learning support coaches, alternatively called special education teachers,

and assigned two coaches to each of four academies in an inclusive high school in California.

The experiences and perspectives of these coaches were explored through an iterative analysis of field notes using grounded-theory techniques. The participants redefined their daily practices by implementing an unusual collaborative-consultation model within their school, in partnership with a university professional development specialist. The relationships with other teachers, as well as their responsibilities to students, administrators and colleagues, were examined against the literature on collaborative models for inclusive education. These field notes documented a two-year period of conversations between professional development specialists and learning support coaches. There were monthly project reports documenting activities with the school which were reviewed with other researchers. Specialists served as participant observers, and the formal interviews with the coaches were video-recorded, transcribed, and member-checked.

Eisenman et al. (2010) found there to be a shifting understanding of the responsibilities of special educators, and that the role of special education teachers is being redefined as teachers and learners of collaboration, creating a knowledge base for specific instruction of students with special needs regarding specific practices to address specific difficulties and needs. The model piloted and examined in this study improved the academic success of students with special needs within the high school in the sample population studied. While the data collected was verified through triangulation, this study had a limited

geographic area and a unique pilot situation. However, the aspect of collaboration in the results of this study corresponds to the results in the previously examined studies, making this element of findings a transferable one.

In a qualitative study, Castro and Morgado (2004) reviewed practices of teachers of students with special needs in order to identify and characterize teacher beliefs about what variables affect their academic achievement. The participants in this study were 76 support teachers working in six special educational teams in Lisbon, Portugal. Ninety-three percent of the teachers were female, averaging an age of 43 years (range 32–60). The mean experience was 20 and 12 years for general and support teachers respectively. Of the total sample, 63% had attended special education training.

A survey was taken for the purpose of gathering participant opinion as to the causes of achievement and academic failure among students with special educational needs. The survey consisted of three sections, the first of which included two open questions that asked teachers to describe their perceptions of their students' academic experiences in terms of what contributed to student academic success or failure. The main goal of the second section was to assess how these teachers viewed five specific factors which Wang et al. suggested contribute to academic success: teaching approach, school climate, curriculum design, student characteristics, and out-of-school context (as cited in Castro & Morgado, 2004). In this section, responses were designed to be recorded on a five-point Likert-type scale. Section three asked for demographic information, as

well as overall teaching experience, teaching experience with students with special educational needs, and special education expertise.

Examination of the survey data focused on data in the following areas: factors contributing to the academic achievement of students with special educational needs and factors contributing to the academic failure of students with special educational needs. Teacher beliefs that seemed relevant to these research questions were interpreted in the light of five general themes: teaching approach, school climate, curriculum design, student characteristics, and out-of-school contextual variables.

The researcher defined a number of categories and subcategories and then coded the data accordingly. Inter-rater reliability was checked by having three judges independently assign each data unit, and ranged between 87% and 95%. Content analysis techniques, such as text encoding, category counts, and the development of key-word-in-context and word-frequency lists were employed. A category system was developed and used to classify qualitative data while preserving the coherence and richness of the subject material.

The five themes Wang et. al believed to be factors contributing to academic success of students were also the same factors which teachers credited for the academic achievements of students with special needs: teaching approach, school climate, curriculum design, student characteristics, and out-of-school-context. Two common elements to each of these themes were cooperation and collaboration within the school and between school and community and/or home. While the geographic area of this study is limited and

does not promote generalizable results, the inter-rater reliability checks, the scientifically validated encoding protocol, the acceptable sample size, and the similarity to results of other research do suggest generalizability.

Hurley (Hurley, 2010) used a qualitative study to determine what characteristics of inclusive early childhood programs are valued by family members and professionals involved with the students. Hurley was also interested to know the rationale for the valuation of program characteristics.

The study used mixed-methods analytic techniques that have been recommended for examining issues related to preschool inclusion. Hurley (Hurley, 2010) used Q-sort procedures and interviews analyzed by the constant comparative method. The Q sample employed comprised 8-10 characteristics which described inclusive early childhood education programs. The q-sort items used were a list of program characteristics identified by researchers in the 5-year multisite Early Childhood Research Institute on Inclusion. The individual items on the list of program characteristics do not describe all programs labeled as inclusive programs but rather are characteristics from a range of programs considered to be inclusive. Q-sort procedures allowed researchers to investigate participants' opinions, especially their perceptions of the most and least valued characteristics of inclusive early childhood programs. They used a q-sort process and analysis and interviews about decisions made by participants regarding their decisions about value of program characteristics. They also did an interview analysis using the constant comparative method.

Twenty participants were selected with a purposeful sampling strategy based on their relevance to items being sorted or questions being answered. Specifically, the participants comprising the P sample (per Q-sort data) were 10 family members of young children with disabilities enrolled in inclusive early childhood classrooms, and 10 professionals working in inclusive early childhood settings. The professionals had experience working in one or more of three models; an itinerant model, which is setting where the student is included full time in a general education classroom and an itinerant teacher facilitates that student's learning in a spectrum of ways, from simply consulting with the general education staff to providing direct instruction to the child with special needs; a team-teaching model, in which teachers work together, typically in pairs, splitting responsibilities or students or both; or an integrated-activities model, which is where students with special needs are integrated in the general education classrooms for parts of their day. The family members had experience with an itinerant model and a team-teaching model. Participants' experiences with models of inclusion and other demographic information were determined with a pre-study questionnaire. For family participants, Hurley (Hurley, 2010) selected nine mothers and one father who had children ages 3-5 who qualified for early childhood special education services in an urban school district in the southern United States. None of the children with disabilities were speech-only or served solely on the basis of language or speech delays. The professional participants selected were five early childhood educators, three speech language

pathologists, one occupational therapist, and one social worker who worked with preschool children with disabilities in the same urban school district.

The data revealed that the most valued program characteristics for the 16 participants who were members of the general factor solution were programs that (a) ensured the active and independent involvement of children with disabilities; (b) were considered high-quality early childhood programs in general; (c) provided accommodations and adaptations to support children's learning; (d) employed professionals open to working with children with disabilities and ensured the collaboration among teachers, professionals and family members; and (e) facilitated the independence of the children with disabilities. However, the 16 participants placed less value on programs that (a) established exclusion criteria for child enrollment or included only children with mild or moderate disabilities, (b) maintained classrooms with 50% of the children with disabilities in the same classroom, (c) provided only unobtrusive adaptations, (d) implemented related services outside the classroom, (e) expected children to spend most of their time in teacher-directed activities, (f) ensured that every classroom has a full-time early childhood special educator, and (g) included adults with disabilities working as employees and volunteers.

Participants' rationales for having more or less value for individual program characteristics were clarified and elaborated by respondents during interviews. For example, members valued the characteristic, "Program hires teachers who are open to working with children who have disabilities." After review of participant interviews, it was discovered that several participants

supported the underlying belief captured in a parent's rationale when that parent stated his belief that children are more tuned in to what adults do rather than what they do. Therefore, if a child with a disability is in a classroom where the teacher is not comfortable with persons with disabilities, the child would recognize that feeling. The parent felt that if a teacher did not want to be working with his child, it could be a negative experience for that child. (Hurley, 2010)

Participants also clarified and elaborated less valued inclusive early childhood program characteristics. For example, participants expressed less value for the program characteristic, "Program only includes children with mild or moderate disabilities." One early childhood special educator explained that being an inclusive program required it, by its nature and title, to include all students. That same educator also noted that the program in which she worked had great success using an inclusive model. (Hurley, 2010) Generally, the families and professionals who participated in this study had varied experiences with inclusive early childhood programs. Despite the variety of participant experience with inclusive settings, one general viewpoint of the majority of respondents was generated about the most and least valued program characteristics: the characteristics most valued, collaboration and community support, were the least employed.

The contributions of collaborative work to the promotion of more inclusive learning settings was studied by Cesar and Santos (2006) in a qualitative action-research design, to understand the effect of collaboration on attitudes about

inclusive settings for students with special needs. They asked the following questions using critical and ethnographic methodology:

- How can inclusivity be seen in students' talk during peer interactions with mathematics classes?
- How does collaborative work contribute to students' mathematical knowledge appropriation and to the development of higher mental functions?
- What is the role of the new didactic contract in the promotion of knowledge appropriation?
- Is there an impact of working collaboratively over several school years in the students' identities and life projects?

The subjects of this case study were students with special education needs, similar to other subjects used throughout this twelve-year Interaction and Knowledge research project. These students attended class in a group of four 9th grade students (14/15 years old) that had been in the project since 8th grade.

The teacher participant in the study had 23 years experience teaching, but this was her first experience as a teacher/researcher. Several observers went to some of the classes, as well as external evaluators. The teacher/researcher obtained most of the data, but data was also collected by outside observers including a psychologist who followed the class often during the study

Data were collected through participant observation, digital photos, questionnaires, interviews, tasks inspired by projective techniques, students' work, academic documents, and teachers' and evaluators' reports. Data

discussed included questions of peer interaction audio taped during mathematics class and interviews with these students. Interviews were completed at the end of the first term and then again at the end of the school year. Interviews were analyzed individually and then discussed by the research team.

During the first week, the teacher gained information to help her understand the students' interests, academic paths, life projects, and mathematical competencies. During the second week, groups were placed into collaborative groups for almost all activities.

In these collaborative groups, students were not able to move on to the next mathematical concept until all members understood the concept. Students employed dialogue and teamwork to help one another learn. In the first week there was protest from the three other group members about having a student with special needs in their group, but soon the group members took pride in helping him grasp concepts.

Throughout the year of the study, the student with special needs gained confidence, and in a one-year post-assessment he was still grateful for his collaborative learning environment. He claimed that each student in his tenth grade class was able to fend for his or her self. (Cesar & Santos, 2006) At the end-of-year interview, one general education student claimed that she was amazed at the friendship she had formed with the student with special needs, and that she'd never have a class that good again.

The mathematical knowledge of the student with special needs was not assessed except as a self-perception. The participant student felt confident about

her abilities, which can be attributed to the new didactic contract in the promotion of knowledge appropriation. The net result was a positive impact on all students working collaboratively with the student with special needs.

This study alone has limited transferability due to a small sampling and participant preconceptions or bias that was not assessed. However, the commonly valued characteristic of collaboration associated with inclusion is in line with results from many other studies, making it generalizable.

Fisher and Frey (2001) conducted a qualitative study to determine in what ways students with significant cognitive disabilities access the core curriculum in general education classrooms. They chose participants from nine urban schools in two states: three high schools, three middle schools and three elementary schools. These participants were students with significant disabilities who received their special education services in general education classes. From the potential pool of 182 students, three students were selected: one from elementary school, one from middle school, and one from high school. Of these three students, two were female and one was male. This selection process ensured that a cross-section of ages was represented. Each of these students had been identified under federal definitions as having significant cognitive disability (severe to profound mental retardation) and was a full-time member of general education classes.

During the time of the observations, one eight-year-old white female was in third through fifth grades in Florida. She had rare migratory brain disorder that affected her speech and language, motor skills, and cognition. She

communicated mostly through gestures and expressions. Because of her significant cognitive disability, during her third-grade IEP meeting, her mother requested full-time placement in general education. She became the first student with a significant disability to be educated in general education at her school. The following year she moved to a grade school serving grades four through six where several students with significant disabilities were educated in general education classes. The special education teacher in that school served as a curriculum designer and coordinator of support. Grade-level teams designed thematic units, and teachers assisted in science labs and discovery classes such as art, music and PE.

The second student was 12-year-old African American male sixth grader at a local middle school at the start of the study, and he was followed through eighth grade in California. He had had three years of general education experience at the time of the study. He communicated with others by using eye contact with pictures or by using a switch-operated voice-output device.

The final student and second female was a 15-year-old Filipina in the tenth grade at the start of the study. She was also followed for two years. This participant had one year of experience in general education. She had cognitive disabilities and was legally blind but could see large images and print.

Classroom observations were completed at random in a variety of subject areas. Data collection observations averaged just over two days per month, each lasting 20-55 minutes, with a total of 60 visits made. The researchers used standard format that included space for observations, quotes, and notes to follow

up during interviews. Although they were unable to record all events in the classroom, the research aimed their recording of information at interactions with the focus student.

During the third year of the study, researchers realized that teachers, parents, and peers held a great deal of information about the ways in which the focus students accessed the core curriculum in their general education classes that might not be accessed through direct observation, so interviews were added. For each focus student, individual interviews, lasting 20 minutes with peers and 75 minutes with parents, were conducted. Two general education teachers and a special education teacher were also interviewed. The interviews started with, "Tell me about [name's] typical day at school." This gave the interviewee an opportunity to describe his or her experiences with the focus students and allowed the interviewer to ask several follow-up questions.

Researchers independently analyzed the data for themes, independently categorizing the data into broad areas, and highlighted quotes and examples that supported each category. Themes emerged during this process of data-analysis, specifically surrounding supports and systems in place to ensure that students with disabilities had access to the core curriculum. The researchers then discussed each theme until a consensus was reached on each item. The methods students used to access the core curriculum clustered into four broad themes: individualized learning, content-specific accommodations and modifications, collaboration among the teaching team, and involvement of peers. Data also uncovered issues with access to curriculum, starting with a

disconnection between the IEP process and classroom implementation of curriculum and instruction. General strategies that were used to create accommodations often did not apply across curriculum, and the IEP was often not referenced in the interviews. Parents and teachers agreed that the IEP was not consistent with the actual practices and was primarily used as a means of obtaining and ensuring supports and services.

Based on the limited sample size of three students in two states, with no reference to demographics in the study, the generalizability would be limited. However, the recurring aspect of collaboration and peer involvement that is valued and successful for inclusion practice appears in these findings as well, making them generalizable.

In a study conducted by Kilanowski-Press, Foote, and Rinaldo (2010), 150 principals from across New York State were sent surveys for their teachers practicing in inclusive classrooms to determine the qualifications, strengths, and professional development of educators working in settings they would define as inclusive. The study also asked how those educators practiced inclusion of students with special needs. Stamped, self-addressed surveys were mailed to randomly selected administrators of fifty elementary schools, fifty middle schools, and fifty secondary schools, who were asked to distribute them to the general education teachers working in classrooms that included children with special needs. Completed surveys were received from 71 inclusion teachers, 39 working in rural communities, 26 working in suburban districts, and two in urban schools, of whom were thirty-six respondents working in elementary schools, five in

middle schools and twenty-seven working in secondary settings. These responses were aggregated to develop a picture of inclusive special education in New York State.

Analysis of 71 inclusion-teacher surveys yielded the finding that the number of college-level and continuing education courses related to inclusion teaching completed by respondents ranged from 0 to 13, with a mean of 2.83 for college courses completed, and a mean of 4.15 for continuing education courses. On average, teachers reported a class size of 23.75 students, and indicated that they served approximately 9.05 students with disabilities within those classes. Of these nine students with disabilities, eight were noted to fall within the mild to moderate disability classification range, with one noted as severely or multiply disabled.

To obtain a broader picture of the activities taking place in the inclusion classroom, teachers were asked to identify the types of classroom supports they received and the amount of time each day that they received these supports. Consultant special education teachers were a very prevalent type of support. Fifty-eight of the 71 (82%) inclusion teachers indicated that they had the assistance of a consultant special education teacher. The primary supports of these consultant teachers included working with small groups of students, co-teaching, one-to-one student assistance, and planning. Seventeen (29%) of the teachers receiving consultant support indicated the most prevalent type of consultant teacher support they received in the classroom was in the form of small group instruction, averaging 58 minutes per day. Seventeen other teachers

(29%) reported the most prevalent form of support received was in planning, averaging less than 44 minutes per day. Sixteen teachers (27%) reported one-on-one student assistance averaging 45 minutes per day, and eight teachers (14%) listed co-teaching as the most prevalent form of support they received, for an average of 52 minutes per day.

The second most prevalent inclusion-teacher support method was volunteer support, with 45 of 71 (63%) inclusion-teacher respondents reporting that they received such assistance. Fifteen of 71 (21%) respondents reported that they received support from teacher assistants. Analysis of respondent data across the population density of districts identified trends in the type of supports and time spent engaged in support provision across rural, suburban, and urban regions. The chi-square analysis indicated a relationship between support type and population density, with co-teaching supports emerging as significantly less common in rural districts than suburban or urban districts (effect size of .364). Rural teachers were found to spend significantly more time engaged in planning activities than teachers in suburban regions, $t(21)=1.96$, $p=.028$. No other relationships or differences were noted between support type or duration and population density.

Types of support services provided to teachers in relationship to the number of students with mild to moderate disabilities in their classes yielded the finding that one-to-one assistance was offered to students with disabilities. In co-teaching models, teachers received planning support and served an average of 9 students with mild to moderate disabilities. Teachers reporting small group

instruction support reported an average of five students with mild to moderate disabilities. A similar pattern of findings was noted in reference to service to students with severe disabilities. Teachers utilizing small group instruction, co-teaching initiatives, and planning support reported an average of one student with severe disabilities in their classrooms. Classrooms where teachers reported students receiving one-to-one assistance noted the greatest number of students with severe disabilities in their classes, with an average of five students with severe disabilities.

Researchers found that co-teaching frequently referred to as the type of consultant-teacher support most reflective of the principles of inclusion and of education in the least restrictive environment, was the least employed avenue for inclusive instruction as reported by teachers. Co-teaching was also found to be the most effective form of support, according to teachers. Common forms of support for inclusion of students with special needs involved occasional visits by the special education teacher into the general education setting, offering teacher support rather than the more ideal integration of special education expertise into the regular education curriculum on a continuous basis. The instructional approach that may most clearly exemplify inclusive practice is the least utilized method of LRE mandate implementation.

Weaknesses of this study include the relatively small sample size, the limited number of middle school respondents, and an under-representation of responding teachers working in urban settings. Important data related to the training experiences of volunteers who were assisting in the general education

settings, was not gathered. Given the large proportion of volunteer assistance cited by teachers, this a missing piece of relevant information. Additional data not gathered was the percentage of time each teacher employed particular supports in the classroom. In spite of the weaknesses of this study, its findings support collaboration, which other research shows as a key aspect of successful inclusion practices, and therefore the results can be generalized.

In a quantitative study conducted by Wei Gao and Mager (Gao & Mager, 2011) researchers examined how pre-service teachers' attitudes towards school diversity and their perceived sense of efficacy shifted through the years of preparation in the inclusive program. This study took place in one Inclusive Elementary Teacher Education Program at a private university in an eastern state of the U.S. The study also explored the relationships between teacher efficacy and teachers' attitudes toward school diversity: How pre-service teachers with different perceptions of teacher efficacy might view school diversity differently.

The study was conducted in one four-year dual-certification inclusive teacher preparation program at a private university in one eastern state of the United States. The program espouses constructivist learning theory and inclusive education. Diversity is integral to the program's philosophy, requiring pre-service teachers to teach both typically-developing and special-needs children. This education program espouses two core beliefs: (a) all persons learn through active engagement in the process of learning, and (b) every person is able to learn.

Of the seven practicum experiences, the program required one with minimum of 90 hours with students with special education needs. Pre-service teachers were also required to take introductory special education courses with one 20-hour fieldwork experience in general classrooms, and an additional experience in the field with a 20-hour practicum focused on children with disabilities.

The sample participant population was 168 pre-service teachers from 6 different cohorts in the program. Each cohort was in a different phase of the program (Professional Practices I-VI) at the time of the study. The majority of the participants were female (n = 160) and Caucasian (n = 156), and the mean age was 19.4 years.

Four questionnaires were used to gather data in the following categories: demographics, sense of teacher efficacy, attitudes towards inclusive education, beliefs about diversity, and attitudes towards inclusive education. The demographic questionnaire was designed to obtain participants' professional and demographic background, including ascertaining the candidates exposure to disability. This survey had 22 items rated on a 6-point Likert scale, which is made up of two independent subscales, Personal Teaching Efficacy (PTE) and General Teaching Efficacy (GTE). PTE represents teachers' beliefs in their personal impact on student learning, and GTE refers to teachers' general confidence in how teaching as a profession can affect student learning. The total score of PTE ranged from 12 to 72 and GTE from 10 to 60. The Cronbach's alpha reliability tests were 0.80 for the PTE subscale and 0.65 for the GTE subscale, indicating

high internal consistency of the scales. The Attitudes Toward Inclusive Education Scale (ATIES) was selected to specifically measure opinions of pre-service teachers about educating children with specific disabilities in general classrooms. This scale consists of four subscales, each respectively measures teacher attitudes toward children with disabilities in any or all of four areas; social, physical, academic and behavioral disabilities. The total score for each subscale ranged from 4 to 24. A higher the score implies a more favorable attitude to inclusion.

The mean scores of all subscales were calculated. One-way ANOVA tests were performed to identify mean differences of the variables of GTE, PTE, and ATIES, using gender, ethnicity, and cohort respectively as independent variables. Post hoc Scheffe's tests were run to determine groups that were significantly different. Correlation analyses were performed to test for relationships between all subscales. Lastly, respondents were divided into two groups by a mean split, one with negative sense of teacher efficacy (TE) and the other with positive sense of TE. One-way ANOVA tests were run to test for differences between these two groups in how they perceived school diversity.

Overall, the participants in the program showed positive teacher efficacy, positive attitudes towards inclusive education, and positive beliefs about diversity. The mean scores of GTE, PTE, and ATIES showed no significant differences between male and female preservice teachers. Caucasian preservice teachers and non-Caucasians showed no significant differences in any of the ratings.

The mean GTE scores were varied in their growth pattern across the cohorts in different phases of the program. GTE increased subsequently for two cohorts (Professional Practice I and Professional Practice II), but decreased again in the Special Education Practicum.

Three major findings emerged in this study. First, participants in this inclusive teacher preparation program showed positive teacher efficacy, favorable attitudes towards inclusive education, as well as positive beliefs of diversity. The findings suggest the inclusive teacher preparation program is effective. However, participants' GTE varied in correlation with particular learning experiences, while their PTE showed linear increase over the four-year program. Pre-service teachers were most favorable towards inclusion of children with social disabilities, but were the least favorable (still positive) to children with behavioral disabilities. Secondly, participants exhibited higher perceived sense of PTE, more positive attitudes towards inclusion, and stronger professional beliefs of diversity as they progressed through the program. Interestingly, those in Special Education Practicum (Cohort 5) showed less positive attitudes towards inclusion than other senior pre-service teachers (Cohort 4-Professional Practice II and Cohort 6-Student Teaching). Finally, pre-service teachers' attitudes towards inclusion and beliefs of diversity were distinguishable by their perceived levels of teacher efficacy. Those with positive PTE had more favorable attitudes towards including children with academic or social disabilities in general classrooms and they also held stronger personal beliefs of diversity. Those with positive GTE were more willing to include children with physical, social, or

academic disabilities in general classrooms and they had stronger professional and personal beliefs on school diversity.

The transferability of this study is limited due to the narrow geographic and ethnic components of the sample, in spite of the strong structure of the research. The findings of positive attitudes toward inclusion of students with special needs linked to general attitudes about diversity correspond to aspects of previously examined research where teachers and staff in a collaborative school culture viewed every student's learning as every teacher's responsibility. In this one aspect, findings can be generalized.

In a narrative qualitative study conducted by Florian and Linklater (Florian & Linklater, 2010), researchers explored how student teachers engage with key aspects of inclusive pedagogy. This study was part of a larger study on the effects of reforming a teacher education program. Qualitative data were collected by audio-recording tutorial sessions and class discussions from a yearlong cohort. The transcripts were analyzed for evidence that the course reforms had been embedded in the curriculum and to identify areas for future development. Florian and Linklater explored how student teachers utilized the principles of inclusive pedagogy, how they responded to students with special needs, and how they worked collaboratively with colleagues to differentiate instruction to accommodate those special needs.

In the findings of this study, student teachers developed an appreciation of the impact of labeling and gained new ways of thinking about teaching. They became skilled at responding to students with varied needs and were able to

creatively offer choices. They also took risks adapting curriculum and practiced new ways of working with colleagues.

This study did not perform any validation of data, nor were demographics considered, inspiring caution in any generalization of results. The results do, however, reflect a similar finding in the aspect of collaboration as a valued and successful pedagogical culture when practicing inclusive education, removing the caution in this aspect.

This section demonstrated the characteristics of settings where inclusive education resulted in significant academic and social growth for students with special needs. The common themes at exemplary schools are a welcoming school climate; a staff committed to the education of all; collaboration between staff, community, parents and peers; curriculum design and joint professional training opportunities; and special education training embedded in pre-service teacher training.

Attitudes Toward Inclusion

The following ten studies investigate the general education teachers' attitudes toward inclusion, their willingness to teach students with disabilities, their positive and negative attitudes regarding inclusive programs, and the practical problems they encounter in implementing these programs.

The attitudes of general education teachers toward inclusion and their willingness to teach students with disabilities were examined by Hwang and Evans (2011) in a qualitative study. The 33 participants in this study were general education teachers from three primary schools in Seoul, South Korea. Each

teacher was in charge of mainstream classrooms that included one student with disabilities. Research was conducted through a teacher questionnaire which provided quantitative data about teachers' attitudes towards inclusion in two parts: First the questionnaire asked for demographic information about participants, and second, the questionnaire provided 25 statements designed to examine teachers' perceptions towards inclusion, their willingness to teach students with disabilities, the positive and negative results of inclusion for students with disabilities, their attitudes towards collaboration and instructional adaptation, and the day-to-day issues they face in implementation problems hampering inclusion. The questionnaire was distributed to the general education teachers of three primary schools in Seoul, by special education teachers working in those schools. Teachers were asked to respond to each statement using a Likert Scale. Of the 33 questionnaires returned, four were not fully completed and were excluded from the data analysis. The special education teachers in two schools conducted interviews. There were 13 questions in the interviews and they were conducted by special education teachers in two of three schools. Nine general education teachers were interviewed; data was recorded through hand-written notes taken during the interviews.

This study found that attitudes toward inclusion to be more positive than negative, and more than half of the teachers believed that inclusion brought social benefits to students with disabilities. A small percentage believed inclusion provided academic benefit. In contrast to the positive attitudes about the value of inclusion, willingness to teach students in their classrooms was significantly

negative. The sample size, geographic area and lack of data validation limit the transferability of these results; however, the corroboration of other studies where teachers have positive attitudes about the value of inclusion makes this finding generalizable. The negative attitude about the willingness to teach students with special needs is contradictory to other studies, and so not necessarily a generalizable conclusion.

Ballhysa and Flagler (Ballhysa & Flagler, 2011) studied general education teachers' perspectives on inclusive education using qualitative methods. Participants were 50 teachers in four mainstream schools involved in inclusive education through a model demonstration project. All of these teachers had been teaching students with special needs for a minimum of two years. About half taught grades 1-4 and half taught grades 5-9. The focus group was six teachers, all female. Four taught the younger students, two the older students. The six teachers were selected from the initial 50 who completed the survey.

Data was collected through two methods, a questionnaire, and a focus group. The questionnaire covered participant demographics, participant preparation to work with students with special needs in mainstream settings, relationship with parents of students with special needs, pedagogical implications of teaching students with special needs in mainstream classes, and collaboration with other experts involved in the lives of students with special needs. The questionnaire was distributed by one of the authors of the study and subsequently collected. The focus group was interviewed in a meeting lasting an

hour and a half, conducted by one of the researchers asking eight open-ended questions about survey areas.

From the questionnaire, findings were that teachers felt ill prepared to work with students with special needs in a mainstream setting. Their pre-service curriculum did not address special needs. The teachers unanimously believed that continuous education on working with students with special needs is requisite. Their top three priorities for preparation were: (1) modification and adaptation techniques, (2) better understanding of IEP's, and (3) knowledge of various categories of disabilities. The focus group revealed that instructional strategies are particularly needed for teachers of math and science in the older grades.

The study uncovered three significant areas of importance for including students with special needs in the mainstream classrooms. First, relationships with parents of students with special needs are critical, but these relationships can be difficult to establish because parents do not always acknowledge their children's special needs. Second, collaboration with other experts in a student's life is valued greatly by teachers, but the current environment is not conducive to fostering that collaboration. Last, administrative support is also severely lacking at a policy level, but support is highly necessary and valued.

The validation of data was limited in this study and the focus group only had one interview with six participants, but in spite of those weak aspects, the results are supported by findings in other research. Although parents were not participants in the study, teacher input stated that inclusion in mainstream

classrooms is seen as valuable by parents and teachers, but the typical education environment does not foster the collaborative culture necessary for success.

Fuchs (2003) conducted a qualitative examination of perspectives held by general education professionals on inclusive education. The central research question for this study was asking what general educators' beliefs are about current mainstreaming practices? This qualitative study focused on the experiences of general educators in a suburban area of a major Midwestern city. All five participants were practicing elementary school teachers and were also members of a Master's degree cohort in Teacher Leadership in a major research university in the Midwest. Five teachers were selected to participate in follow-up interviews and classroom observations. Each of the five teachers met three criteria: (a) currently teaching in a general classroom setting, (b) experienced with students with disabilities in the general classroom setting, and (c) willing to participate in all subsequent portions of the study. The five teachers selected for the follow-up interviews and classroom observations also represented a range in years of experience and teaching assignments.

The volunteer participants were divided into two focus groups. Each focus group was interviewed using a standard set of open-ended questions derived from the central research question. This study was conducted using group interviews (focus groups) and individual interviews. The group interviews focused on general beliefs and attitudes about current practices related to inclusion.

The open-ended questions included general thoughts and feelings about inclusion, teachers' level of preparedness related to their teacher education programs, their perceived level of success in educating children with disabilities in the general classroom setting, and their recommendations for improving current practices.

Two or three months after the focus groups were conducted the five selected teachers were interviewed individually. Participant responses were analyzed using constant comparison analysis rather than by collecting all data before analysis. Constant comparison analysis was used to provide the researcher with emerging themes and notable information during the data-collection process. All group and individual interviews were audio-recorded. Audio-recordings and transcripts were reviewed multiple times to ensure accuracy of the transcriptions and to aid in analysis and synthesis of the data collected. Data was triangulated using member-checks (verifying information with the participants) for the purpose of accurate documentation of their responses. Participants were not asked to corroborate the researcher's analysis.

Areas of concern that emerged from the data collected were a lack of administrative support, teachers' perceived lack of support from special educators and support staff, and a lack of sufficient preparation in their pre-service programs. Teachers also felt that they lacked both adequate planning and collaboration time and also instructional time sufficient to cover all the additional requirements in the curriculum. The participants agreed that there was not enough administrative support to successfully teach a wide range of learners.

The predominant area of concern was with unrealistic expectations and job responsibilities. The participants viewed the current practices of special education support staff as falling short of what teachers considered to be the job description of the support staff. They also expressed a definite tension between the general and special educators within schools.

Most of the participants agreed that inclusion was a positive educational placement and that both students with and without disabilities benefited from being in the same classroom. However, the teachers in this study do not favor inclusion, in its current practices, because they feel unprepared to meet the demands and responsibilities. Though they were willing and interested in practicing inclusion, they lacked adequate planning and collaboration time as well as instructional time to cover all the additional requirements in the curriculum, and they were not adequately prepared by their pre-service curriculum.

Ultimately, the study revealed that while teachers were willing and interested in including students with special needs in their classrooms, they felt ill prepared to do so due to lack of pre-service curriculum addressing these students' needs, a lack of an administrative and working environment conducive to collaboration with experts associated with these students, and lack of administrative support.

These findings agree with findings of other research with belief that inclusion is a positive educational placement and that it is not adequately supported. The findings are credible in that agreement, and in the collection of data and its analysis, even though the sample size was small.

Diamond and LeFurgy (1994) assessed parents' attitudes toward integration of preschool children with special needs. Parents completed a questionnaire designed to assess attitudes toward integration. The questionnaire consisted of seventeen questions divided into four scales assessing parents' responses to integration issues. Three additional items focusing on curriculum were added. The questionnaire used a 5-point Likert-type scale, ranging from *strongly agree* to *strongly disagree* for each item. Questionnaires were distributed to all parents at the beginning of the school year. Completed questionnaires were returned from a total of 141 parents. These included 30 parents whose children had identified disabilities, 60 parents whose typically developing children were enrolled in integrated classes, and 51 parents whose typically developing children were enrolled in nonintegrated classes. The questionnaire was distributed a second time at the end of the school year (in May). Questionnaires distributed in the spring were returned by 43 parents (55%) whose typical children were enrolled in nonintegrated classes, and 23 parents (61%) of children with disabilities. No other questionnaires were returned. The initial focus of analysis was on the factor structure of the questionnaire. Additional analyses examined differences in parents' responses on this questionnaire at the end of the school year.

Completed questionnaires were available for 141 parents. A principal-components factor analysis procedure was applied that yielded a four-factor solution, accounting for 56% of the total variance. This solution was selected

based on Cattell's Scree Test. Internal consistency was high for all factors, with alpha coefficients ranging from .79 to .92.

Eighteen of the original 20 questionnaire items loaded individually on these four factors. In this analysis, six items reflecting positive interactions between children, families, and teachers loaded on the first factor. In integrated classrooms, this factor included items such as, "children develop an acceptance of differences," "there is positive social contact between children," and "parents of both groups of children feel comfortable with each other." Seven items reflecting individualized developmentally appropriate practices were loaded on the second factor. In integrated programs, this factor included items such as "children do not have the chance to work at their own best rate," "the typical nursery school curriculum is watered down in order to meet the needs of students with disabilities," and "children's needs for organization and structure are not met." Two items ("children are compared to each other more often," and "activities need to be adapted for all students") loaded on the third factor. Three items reflecting similarities and differences (e.g. "children who are handicapped and non-handicapped do not have much in common") loaded on factor r.

Using the factor structure described above, an examination of differences in the questionnaire responses received from parents was completed at the end of the school year. Parents' responses indicated positive overall attitudes toward integration. Mean scores for all four factors were significantly more positive than the neutral mean of 3.

A 3 x 4 multivariate ANOVA revealed significant main effects of program and significant differences in responses on the four factors. Analyses revealed that parents of children with and without disabilities enrolled in integrated programs gave significantly more positive responses on this questionnaire than did parents of children without disabilities enrolled in nonintegrated, self-contained classes. .

These results also suggest that personal experience in an integrated program may influence parents' attitudes toward integration, but Diamond and LeFurgy (1994) found that overall, parents shared positive attitudes toward integration of students with special needs into the general education population.

This was a credible study with regard to sample size and the use of Factor Analysis to study the patterns of relationship among the variables, in spite of a small number of parent participants. The findings are similar to findings by Hwang and Evans (2011) in terms of positive attitude toward inclusion of students with special needs in the general education classrooms, which supports limited generalization.

Runswick-Cole (2008) examined the attitudes of parents of students with special needs that determine whether they choose to place their children with special educational needs in mainstream or special schools, within the current policy and legislative context advocating primarily mainstreaming.

This qualitative study used interviews to collect data from twenty-four parents. Of the twenty-four parents, there were seventeen mothers and seven fathers. None of these parents were partners of other parents in the study.

Additionally, seven professionals took part in the research. Two of them were solicitors and chaired special needs education panels. Three of the professionals were LEA officers who had worked in special education schools prior to working in administration. One professional was serving an LEA psychologist.

All of the interviews were carried out by the author. The interviews used a narrative approach in which the participants were asked to explain why they registered an appeal with the Special Educational Needs and Disability Tribunal (SENDIST). The Tribunal is an independent government body to which parents may appeal decisions of the Education and Library Board with respect to said parents' child and that child's special needs. (Northern Ireland courts and tribunals service, 2011)The participants were given copies of their transcripts and were asked to comment on them if they wished. The transcripts were analyzed using thematic analysis. This involved identifying themes and patterns within the narratives by condensing the data into analyzable units.

Parents' attitudes to inclusion are set in a policy context in which the general principle enshrined in law is that children with special educational needs should normally be educated at mainstream schools, particularly when that is what their parents want. Parents held complex and conflicting views about the policy and practice of inclusion. While the Department for Education and skills (DfES)is clear that inclusion is about more than school placement, in the context of the Tribunal, parents were often focused on making sure a child was placed as they chose, either in a mainstream or special school. Some parents were

committed to mainstream school, whereas others believed special school was the only environment where their children's educational needs could be met. While parents were divided about the merits of mainstream or special schooling, they were united in feeling that the issue of inclusion was one where the stakes for their child were high and the possible gains or losses great.

Parents' stories about inclusion fell broadly into three categories: those parents who accepted nothing but mainstream schooling for their children; those parents who were committed to mainstream schooling for their children, but later changed their minds; those who never considered mainstream for their children and always wanted them to go to special school.

Runswick-Cole ((2008) used a social model approach, which suggested that parents who chose inclusive schooling for their children engaged with a model of disability that focused on the need to remove barriers to children's learning, and on their acceptance within mainstream settings and their experience of exclusion in mainstream school. However, barriers to their children's participation, including lack of resources, hostile school cultures, inflexible teaching styles and attitudes to difference in mainstream schools, had not been removed. Parents gave up on their initial hopes for a mainstream education for their children because of the effective exclusion that their children experienced within mainstream settings. Most of these parents preferred to mainstream their children, but they found the practice of mainstreaming to be lacking due to lack of resources, hostile school cultures, inflexible teaching

styles, and detrimental attitudes of others toward difference. These parents chose self-contained settings for a better expected outcome.

The attitudes of parents in this study reflect other research regarding attitudes about inclusion as what is best for educational outcomes of students with special needs. The study is also credible on its own, in spite of the small sample size and limited geographic area, with data validated by member-checks and the use of recognized protocol for analysis of interviews.

In a qualitative study, McQuat (2007) examined whether special education served the student or the institution. The participants were twelve special education teachers from three schools in a district with an enrollment of 48,000 students. The district population consisted of a racial make-up of 51% European American, 35% African American, 10% Hispanic, 1% Asian, 3% multi-racial or other. Three of this district's schools were represented in this study: one elementary, one middle, and one high school. They are in a rural area outside the city limits of a large city and a smaller city.

Within special education, the teachers had three different general roles: case manager, inclusion/resource teacher, and self-contained teacher. In order to form the basis of understanding of teachers' perceptions of the special education program, an open-ended interview was used. The interview comprised the following four open-ended questions:

- What do you see as the challenges and benefits of Exceptional Children (E.C.)?

- Are E.C. and support services provided on the basis of need or availability? Explain.
- What are the characteristics of children more likely to be mainstreamed back into regular classes?
- If you had the power, are there any changes that you would like to make in the E.C. program?

The questions were provided to teachers at least one week prior to the interview to permit time to reflect on their responses. On the day of the interview, the questions were transcribed as the teacher responded orally. The teacher interview, which took about 20-40 minutes, was conducted on a one-on-one basis. Responses were analyzed by their content related to agency.

Unexpectedly, a theme of professional marginality emerged that was so significant that, even though not a theme originally intended to be studied, became a central part of the study. The dynamic of sorting teachers towards unequal and separate tracks has been studied previously with the induction of new teachers relative to district capital and with regard to promoting an equitable education for students with diverse backgrounds, however not with the special education population.

An unintended finding of the study was the apparent neglect and subsequent isolation and marginality of special education teachers, especially teachers who work in self-contained classes. The majority of respondents complained that special education teachers had larger class size than higher curriculum tracks (honors/AP). Others referred to special education teachers

having hand-me-down materials, being excluded from field trips, and being ignored in curricular decision-making. One participant stated that methods that were typical to special education, such as teaching across curriculums and constructivism, were becoming the new methods for teaching regular education students. A consistent response made by almost all teachers was the conflict between national legalization, such as NCLB, and classroom practices. Eight of the twelve teachers referred to high-stakes testing as a challenge of the special education program, specifically in the fact that the students were forced to take tests that did not correspond with the heavily modified material that was being taught in these programs. Also, several teachers referred to governance outside the school system (e.g. audits by government agencies, yearly data requirements of the No Child Left Behind Act) as creating a milieu of fear and anxiety.

Teachers' responses reflect a perspective of an environment that promotes order and compliance while discouraging creativity and collaboration. In essence, as long as the work in schools is distributed through specialization and coordinated through standardization, there is no need for personnel to collaborate. In short, this study found that the practices that would best serve the needs of the students and staff (e.g. collaboration) were not fostered, in favor of policy compliance.

The sample size was not statistically significant to provide research credibility, nor was the isolated geographic area. Researchers also only interviewed special education teachers, not general education teachers, administrators or community members. While this is a unique study, it is a

reflection of attitudes of administration toward special education and inclusion models that have been found in other studies, for a limited generalizability.

Berry (2006) observed inclusion classrooms for nine months to determine how teachers establish a community ethos, how students respond to positioning of students with disabilities, and how macro discourses shape interactional processes. This qualitative study was ethnographic, studying a single classroom. This second- through fourth-grade classroom was attended by 29 students, of whom more than half qualified for free or reduced lunch and it included twelve students with special needs. The class was taught by two teachers, one from general education and one from special education. Both teachers held strong beliefs in innovative student-centered teaching methods, inclusive multi-age settings, teaching collaboration, and inclusive teaching models; they also believed that relational processes provide the means by which students become accepted and valued members of a learning community.

Over the nine months of the study, researchers conducted audio taped interviews, videotaped classroom observations, took extensive field notes, and observed small- and whole-group interactions. The analysis draws on Hymes's speech act theory to examine the interplay among classroom settings (whole-class, small-group), participants (teachers, students), and their stated and apparent ends (purposes, outcomes).

Berry (2006) presented several recommendations for teaching in inclusive classrooms:

- teachers should resist placing students by proxy without understanding what students will experience as a result of placements;
- teachers need to be aware of classroom assumptions about difference and disability in order to challenge prior conceptions;
- providing direct and explicit instruction and preparation regarding expected social interaction during group placement has the potential to hinder group dynamics;
- students who are marginalized may disengage without the support of a teacher; and
- higher status students may use the teacher's words to manipulate the marginalized.

These results suggest that a positive attitude toward inclusion is not the only factor for consideration for a successful outcome for all students.

Awareness and education in the area of special education, as well as community building in a classroom, are also important elements in the success of an inclusion model. This study has limited generalizability due to the small sample size, the single geographic area, and the uniqueness of the study.

Brown, Welsh, Hill, and Cipko (2008) performed a qualitative study of pre-service teachers to determine if embedding instruction regarding adaptations to classroom assessments within the pre-service teachers' evaluation and measurements course increased their knowledge and competency in describing the nature of learning disabilities and appropriate adaptations for teaching and

assessment. Researchers also assessed if embedding instruction of adaptations to classroom assessments in a general education evaluation and measurements course (a) increased the confidence of and (b) affected the attitudes of pre-service teachers toward meeting the needs of students with learning disabilities?

Participants were teacher candidates attending a regional university with an enrollment of approximately 13,000 students located 25 miles from Philadelphia, Pennsylvania. This university has a strong focus on teacher education and is accredited through the National Council for the Accreditation of Teacher Education (NCATE). Teacher candidates enrolled in a required undergraduate evaluation and measurement course during fall 2006 semester participated in the study (N=208). Sections of this class comprised a heterogeneous mixture of elementary, secondary, early childhood and special education majors with approximately 95% of the participants being traditional university students. More than half of the students held junior standing, but sophomores, seniors and post-baccalaureate students also participated. Participants averaged a GPA of 2.8. While 21.2% were special education majors, over half of students reported that they had not taken a course focused on inclusion practices prior to the focus semester.

Participants enrolled or pre-registered in one of six sections of the required evaluation and measurement course prior to the start of the semester. A pretest/posttest, control-group design was utilized for this study. Three sections (n=109) served as a control group and were taught in strict accordance with the common syllabus. The remaining three sections (n=99) served as the

experimental group and were taught by a different professor. Treatment consisted of large-group instruction and structured small-group activities regarding the nature of learning disabilities and accommodations and adaptations appropriate for instruction and assessment of students with learning disabilities. Treatment was embedded throughout the semester within each of the four course-content areas.

A self-report survey was developed to assess teacher-candidates' knowledge of learning disabilities and attitudes toward teaching students with learning disabilities. Items assessing knowledge of learning disabilities were open-ended and required students to respond by listing adaptations or by providing definitions. A unit was also included to determine if participants could differentiate the nature of learning disabilities from developmental delay/mental retardation.

Correctness of responses for the qualitative items was determined by two experts in the field in accordance with current literature. Results of the qualitative items assessing knowledge of learning disabilities and of appropriate adaptations were coded independently for completeness and accuracy by two of the investigators who teach assessment and have experience and training in the area of special education. Interrater reliability was established on a random selection of these surveys (15%). Cohen's *k* reported to be .94.

Results showed that following the semester, 38% of the control group could correctly define the term *learning disability* as well as the term *mental retardation*, compared to 93% of the treatment group. A significantly higher rate

of the treatment group could identify appropriate adaptations to various learning disabilities.

The treatment group had a great effect on participants' confidence in being able to meet the needs of students with disabilities (SWD) and adapting assessment. They also represented a statistically significant difference in their attitude toward responsibility for SWD. Embedding educational techniques for special education into teacher education curriculum contributes to confidence in teacher candidates' ability to meet the educational needs of students with special needs. The sample size of this study was sufficient to lend credibility to the results, as was the use of a control group. Further strengthening the credibility of the study was the validation of data. The limiting factor to generalizability was a single geographic location.

Gürgür and Uzuner (2010) completed an action-research study to determine the opinions of teachers of students with special needs as well as teachers in the general education population, all of whom worked in inclusion classes based on a co-teaching approach, in terms of their preparation for and application of such a program.

The participants in this study included one regular education teacher, one special education teacher (and researcher), and 35 second-grade students. The regular education teacher was a classroom teacher with 18 years of professional experience, who had graduated from a teacher-training school. She had no experience relating to inclusion applications except for her participation in an in-service training course on the topic "special education." She had the

responsibility for the whole class during the process. The special education teacher was also the researcher, with a degree in special education, whose role was to collect data and guide the teacher in the analysis of the data; he was also assigned as the special education teacher for that classroom. The 35 students were in second grade, with 13 males and 22 females. Two students were focused mainstream students, one nine-year-old female with a hearing impairment and cerebral palsy, and one nine-year-old male with low academic success.

Co-planned lessons were implemented on two days each week. Co-planning meetings were held each week before the applications of the lesson, and reflection meetings were conducted after teaching the lessons. The cycle of co-planning, teaching, and reflecting lasted for 12 weeks, and 25 co-teaching lessons were implemented in this process. During this cycle, a trustworthiness committee, whose role was to observe the data collection process within the scope of the research and provide guidance, met, on average, every three weeks to discuss observation data and provide guidance. This committee consisted of four college professors specializing in special education.

Re-evaluation was carried out in the last step. Semi-structured interviews were conducted with the classroom teacher, planning meetings were arranged to prepare for the teaching of lessons, and reflective daily data sources compiled by the researcher were utilized.

Reliability and validity of the audio-recording transcriptions were ensured by the authors. The data were analyzed from a phenomenological perspective in

the form of induction to increase awareness relating to the opinions of the teachers and ensuring in-depth view. The special education teacher determined the criteria for the research, as he was also the researcher. He thought that the general education teacher accepted his students, but the researcher did not comment on the process itself. His expectation of the general education teacher was low, but he believed that it would change when she became familiar with his process and students. On the other hand, the classroom teacher believed that students with special needs were under the responsibility of special education teachers in the inclusion class, and she was subtly uncooperative, by not preparing for lessons or not attending meetings as agreed upon when she initially volunteered for the research.

The findings of this study indicate that individuals' perceptions, ways of construing systems, opinions, intentions, and attitudes influence the successful application of a program like the one in this research. Concepts present in the research are life cycle, pure intention, authority, construing systems, effective communication, the sense of self-sacrifice and responsibility, minding and respecting individuals, resistance to learning and planned teaching, and the disharmony between any or all of these concepts.

Gurgur and Uzuner found through analysis of data collected, that "General education and special education teachers must receive training on issues of inclusion, special education support services, and cooperative skills. The class environment must be arranged, and teaching equipment and staff must be provided for qualified co-teaching applications. Teachers implementing a co-

teaching approach must have and use time for co-planning and reflection meetings.” (Gurgur & Uzuner, 2010, pp. 326-327) Communication between teachers is crucial. All of these findings are reflected in other research relating to attitudes about inclusion. More education and preparation leads to more positive attitudes toward implementing inclusion. This study is only generalizable in that other studies show similar results regarding preparation of teachers for inclusion of students with special needs, as both participants showed signs of grudging participation, most likely skewing results.

Vannest and Hagan-Burke (2010) analyzed ways in which special education teachers spent their instructional day differed from how others perceived their use of time. This quantitative study involved 36 special education teachers assigned to students with high-incidence disabilities. The teachers were from 11 schools in two school districts in central Texas, and met the following criteria: (a) fully licensed and certified in special education and (b) full-time educator responsible for instruction for students with special needs, specifically, high-incidence disabilities. The participating teachers taught these students in one of four instructional arrangements, listed here from most to least restrictive: (a) instruction delivered in a self-contained class for students exhibiting emotional or behavioral disorders (EBD), (b) resource instruction, (c) content mastery (CM), and (d) co-teaching with a general education teacher in a general education classroom. Of the 36 participating teachers, fourteen were resource teachers, seven were content-mastery teachers, nine were adaptive behavior teachers (EBD), and six were co-teachers. There were three males and 33 females, and

their years of teaching experience ranged from 0-17 years. Fifteen of the teachers had less than five years' experience, 13 had 5-10 years of experience, three had 11 years' experience, and two had 16 -20 years of experience. One participant had more than 20 years' experience. No data on years of teaching experience were given for two study participants. The highest degree earned also varied along the participant sample. Of the 36 teachers participating, 25 held bachelor's degrees, nine held master's degrees and no data was given for two participants.

Of the two school districts, District A (N=14,706 students) had a greater proportion of economically disadvantaged (65%), whereas District B (N=8,724) served students who were more economically advantaged and less ethnically diverse. Both districts shared similar percentages of children in special education (8.6% and 8.7% respectively).

The interest of this study was to quantify how teachers spent their time on a range of activities typically expected of special educators. Researchers developed a Teacher Time Use instrument. This electronic instrument measured variables that were face-validated and then field-validated by teachers and administrators. It allowed a special education teacher's entire work day to be represented by activity codes with corresponding percentage expenditures of time. Reliability was also assessed through direct continuous observation data comparison. The instrument consisted of a handheld device or a computer recording device with which teachers would log on to a web site at a selected interval (15 or 60 minutes), select a category of time-use visually displayed as a

radial dial for each of the 12 teacher behaviors, and then submit the information. This process was repeated throughout the day for each of the data-collection days. Twelve activity codes were agreed upon to represent a teacher's activities across the school day; they were conceptualized by a decision-making tree for coding and to demonstrate their mutual exclusivity.

Teachers had to make decisions based on both on the type of activity they were engaged in and the length of time during which they were engaged. Values were assigned to time increments. Increments of time use were classified with a corresponding numerical increment as *most of the time*(80%-100%), *a lot of the time* (60%-79%), *some of the time*(40%-59%), *not much of the time* (20%-39%), *a little of the time* (3%-19%), and *none of the time* (0%). Activity codes were then field tested with 19 teachers over 555.45 hours in the fall and 758 hours in the winter.

All teachers participated in a two-hour training session on the operational definitions of each code and study procedures. The project staff conducted follow-up visits with teachers in their classrooms to answer questions, clarify procedures if necessary, and assure that teachers felt ready to accurately code their behaviors in the classroom.

According to the data, special education teachers spend less than of half their day teaching, with a quarter of their time being spent on tasks related to documentation, administration, and advising or seeking advice from other teachers or parents. These findings differ significantly from the perceptions that 75% or more of their day is spent teaching. The study is only reflective of typical

days and only spanned one semester, so generalizability is limited. It reflects attitudes about special education and inclusion in misperceptions of what special education requires.

This section demonstrated globally held attitudes regarding inclusive education of students with special needs. Most teachers, parents and communities express positive attitudes toward the philosophy of inclusion, but many teachers resist participating in these practices for a variety of reasons, predominantly lack of training and administrative support. Parents of both children with special needs and children without special needs have positive attitudes about the philosophy of inclusion as well. Their concern is that the implementation of inclusion programs is not optimal in terms of support and training.

Summary

This chapter reviewed 30 research studies on the philosophy of inclusive education for students with special needs with regard to effects, best practices and attitudes. Overall, inclusion of students with special needs in general education classrooms produces positive results socially and academically for all students. The best practices for achieving optimal results include collaboration, education and training, and a building and community culture of cooperation. Attitudes of parents, teachers and community members toward inclusive education of students with special needs are positive. They agree that inclusive education is the best placement for most students with special needs, but recognize that without support from administration, appropriate education of

teachers, and a collaborative and cooperative school culture, inclusion models do not work. The next chapter will summarize findings, present classroom implications, and make recommendations for future research.

CHAPTER 3: CONCLUSION

Introduction

The previous chapter presented a critical review of the literature on the philosophy of inclusive education for students with special needs, covering effects, attitudes, and best practices. This chapter will summarize findings, present classroom implications, and make recommendations for future research.

Summary of Findings

Overall Effect of Inclusion

In the six quantitative and four qualitative studies in this section, the major findings of the effects of including students with special needs in general education settings is that it is beneficial to those students, and improves their social development.

Ryndak et al. (2010) determined that, when compared with services in self-contained special education settings, providing special education in inclusive general education settings may lead to better outcomes for students with significant disabilities. In a previous study, by Ryndak et al. (1999), a similar conclusion was found when the student achieved significant and immediate progress after changing from a self-contained setting to an inclusive setting for her education. These two studies found dramatic results and the research was thorough. While there were only two and one participants respectively, each study explored and studied every aspect of each participant's life and achievement thoroughly, and accounted for variables not specifically studied.

The studies also looked at longitudinal results, following these students into adult life, where the results of the difference in their educational settings were most dramatic. Carter et al. (2011) found similar results of immediate and pronounced improvements in social interactions when students were included in mainstream classes, as did Rujis et al. (2010). However, Rujis et al. found no significant differences in academic performance with a placement in an inclusive setting. Smoot (2011) found challenges to the social improvement when students had been mainstreamed for long periods, but for students with more severe needs who were new to the mainstream environment with more, there was a positive social impact. In a study by Campbell (2010), the data suggested that either full- or part-time inclusion is statistically significant in positive impact on the intent of students in the general education population to include students with disabilities in social contexts, regardless of other influencing factors such as socio-economic differences. Weiner and Tardiff (2004) conducted a study of social and emotional functioning of children with learning disabilities and found that students receiving in-class support were more socially accepted by their peers than students receiving resource-room support, and the participants reported higher academic self-image than those in resource settings. A study by Daniel and King (1997) contradicted the previously mentioned studies when they found no significant improvement in academics and a significant negative impact on behavior when students were placed in an inclusive environment. Lane et al. (2005) also found no significant difference between self-contained students and inclusion students in growth in reading comprehension for students with

emotional and behavior disorders, but results favoring the self-contained school for better oral language and reading scores. This study used standard testing like Woodcock Johnson 3, to determine progress, giving the study accepted tools for credibility. It also studied a specific population (Emotional or Behavioral Disorder) not considered in other included research, so different results are not surprising. Social acceptance was also found to be a challenge in a study by Frederickson et al. (2007). The primary tools used in this section's research were interview, survey and observation. When demographic information on race, socioeconomic status, and gender were included in the studies, participants tended to be primarily male and African American. Grade level and socioeconomic status of participants covered the full range.

What Does Successful Inclusion Practice Look Like?

In this section two quantitative and eight qualitative studies showed a strong alignment in all of the studies as to what makes a successful inclusion practice in education. All of the studies came to the same conclusion about what makes an inclusion model work well, even with the diverse types of schools and regions studied, which is the strongest indicator of the validity of the conclusion. Those elements common in all of the studies were collaboration and cooperation. In this section, interview, survey and observation were the primary methods of data collection, and there were more female teacher participants than any other. Urban, rural and suburban settings were present almost equally. All schools studied experienced success in their programs, which generated the interest in studying how they were successful.

According to Wallace et al. (2002), the communication and collaboration practices found to demonstrate success at including students with disabilities in general education and achieving exemplary outcomes for all students were block scheduling, collaboration, joint professional opportunities, and most importantly, a school wide culture of staff commitment that all teachers and staff serve all students. The schools studied in this research were exceptionally successful, winning awards for their programs, and they were from a variety of demographic profiles, making this the strongest study in this section. These findings were echoed by Farrell et al. (2007) adding the component of flexibility to the successful model. Eisenman et al. (2010) discussed the definition of roles of special educators in a successful inclusive model, again emphasizing collaboration and advocating training in special education methods for all staff. Castro and Morgado (2004) again found that school climate was a significant factor in inclusion model success and added the aspect of out-of-school contextual variables, or community. Cesar and Santos (2006) also found collaboration to be a key factor in success of students in mainstream or inclusive settings. Fisher and Frey (2001) confirmed, yet again, the value of collaboration and curriculum design as critical factors in the success of an inclusive education environment. Kilanowski-Press et al. (2010) focused on an instructional approach for success, which included and required administrative support in the form of a co-teaching model. Wei Gao and Mager (2011) found that teacher training played a significant role in the success of inclusive education. A study by Florian and Linklater (2010) agreed with the Gao and Manger study in the value of teacher

training to success of the inclusive education models. Hurley (2010) looked at a different aspect of inclusion models and explored what parents of children with special needs valued in an inclusive program. She found the parental values reflected the best practices already discussed.

Attitudes Toward Inclusion

This final section, with two quantitative and eight qualitative studies, found a common positive attitude toward the inclusion of students with special needs in a general education setting, and just as common, a reluctance to practice that model due to lack of support and preparation. Questionnaires and interviews were most commonly used to collect data. One unique method of study, an action-research design, is included in this section's research. In the first three studies, teachers were the participants; in the next two, the participants were parents of both students in general education and those with special needs. One study focused on the perception of how a special education teacher spends the educational day, the results of which exemplify the misconceptions and attitudes about what that job entails.

Hwang and Evans (2011) found attitudes toward inclusion to be more positive than negative; they also found a general belief that inclusion brings social benefits to students with disabilities. Diamond and LeFurgy (1994) also found that, overall, parents shared positive attitudes toward integration of students with special needs into the general education population. Results from a study by Runswick-Cole (2008) confirmed those in Hwang and Evans, showing that parents would prefer to mainstream their children, but find the practice of

mainstreaming to be lacking due to lack of resources, hostile school cultures, inflexible teaching styles, and detrimental attitudes of others toward difference. Ballhysa and Flagler (2011) echoed the sentiments of parents in the Runswick-Cole study when they found that the current environment is not conducive to fostering either collaboration, an essential characteristic of a successful inclusive education setting, or administrative support, which is highly necessary and valued but also severely lacking at a policy level. Fuchs (2003) further corroborated these concerns when he found a lack of administrative support, teachers' perceived lack of support from special educators and support staff, and teachers' perceived lack of sufficient preparation in their pre-service programs. His study also revealed that teachers do not favor inclusion in its current practices, because they feel unprepared to meet the demands and responsibilities. Fuchs also found that while they were willing and interested in practicing inclusion, they lacked adequate planning time, collaboration time, and instructional time to cover all the additional requirements in the curriculum, and they were not adequately prepared by their pre-service curriculum. Gürgür and Uzener (2010) also found that a lack of preparation led to teacher disinclination to participate in the inclusion of students with special needs in their classrooms.

Brown et al. (2008) confirmed the lack of preparedness in their study when only 38% of pre-service teachers were able to correctly define terms associated with special education. Berry (2006) found that teachers need to be aware of classroom assumptions about difference and disability, again pointing to lack of teacher preparation. McQuat (2007) found that teachers' responses reflect a

perspective of a program that promotes order and compliance while discouraging creativity and collaboration. The system, teachers believed, seemed to operate on the notion that, as long as the work in schools is distributed through specialization and coordinated through standardization, there is no need for personnel to collaborate. In short, McQuat found that the practices that would best serve the needs of the students and staff (e.g. collaboration) were not fostered. Vannest and Hagan-Burke (2010) found that special education teachers spend less than half their day teaching, with a quarter of their time being spent on tasks related to documentation, administration and advising or seeking advice from other teachers or parents, indicating a deficit in administrative support for their instruction.

Classroom implications

Inclusion of students with special needs in general education has been shown to have positive effects on the special population's social development as well as on their academic achievement. Two of the strongest studies of effects of inclusion of students with special needs in a general education setting, are Ryndak's two studies, (Ryndak et al., 1999; Ryndak et al., 2010). These studies showed through both short-term and longitudinal observation and interviews, the striking development and achievement in academics, social skills and life skills achieved by a student who was placed in an inclusion setting after beginning her educational career in the same self-contained classroom as the second student. Similar results were found by Campbell (2010), Weiner and Tardif (2004), and Lane et al. (2005). Carter et al. (2011) found, through observation, that when

interaction with peers in general education was substituted for para-educator interaction in a general education classroom, the social growth of students with special needs improved. Socio-emotional functioning of students with special needs in general education settings was found to improve with more students with special needs in the classroom, according to Rujis et al. (2010).

In one study included in the research, Daniel and King (1997) found no conclusive evidence of either positive or negative effect on the achievement and development of students with special needs when placed in an inclusive educational setting. One qualitative study (Frederickson et al., 2007), and one quantitative study (Lane et al., 2005) found contradictory results, where some students with special needs were perceived by their parents to develop behavior problems after placement in an inclusive setting, and children with the specific special needs of emotional behavior disorders found their condition worsen. However, the Smoot study used no triangulation, no member-checks, and a single demographic element in a sample of convenience, lending little credibility to the study. The Lane study was found to be weak in sample size and only investigated two settings for the participating students

Attaining positive results for all students using an inclusion model of education requires specific pedagogy and culture. The literature shows that collaboration and cooperation between all members of an educational community is essential for success in this model, as well as training and education in special education needs and methods. The most important finding, in all ten studies in this section, was that collaboration and cooperation are essential elements of a

successful inclusion model. The strong effect of collaboration extended beyond the relationship between adults; Cesar and Santos (2006) found that peer collaboration also contributed positively to the success of inclusive models. Wallace et al. (2002), Farrell et al. (2007), Castro and Morgado (2004), and Hurley (2010) also found that a culture of achievement, where the belief and expectation that all students can learn, greatly contributes to the success of inclusion models. Eisenman et al. (2010), Castro and Morgado (2004), Wei Gao and Mager (2011), and Florian and Linklater (2010) all found that teacher training was also an essential element of a successful inclusion model.

In the final ten studies, the attitudes of teachers, parents, administrators and students toward the inclusion of students with special needs in general education classrooms were explored. Hwang & Evans (2011), Ballhysa and Flagler (2011), and Fuchs (2003) found teachers, in both general education and special education, to have a positive attitude about including students with special needs in their classrooms and a belief that it was the best setting. However, and importantly, their attitudes about the actuality of including students with special needs in their classroom were not as positive. These teachers felt a lack of preparation and administrative support, necessary for the successful implementation of an inclusive model. Parents shared similar sentiments. In studies by Diamond and LeFurgy (1994) and Runswick-Cole (2008), parents expressed positive attitudes about the concept of including students with special needs in general education settings, and in fact believed them to be the best placement for those students. The parents shared a similar concern to the

teachers in the previous studies, that teacher preparation and administrative support did not facilitate the success of this model. This sentiment about lacking administrative support was echoed in a study by McQuat (2007). Researchers found the administrator concern to be serving the organization, not the student. In their study, special education teachers were found to be isolated and marginalized, and administrators to be promoting order and compliance with standards as set in No Child Left Behind legislation, and discouraging collaboration. A study by Vannest and Burke (2010) confirmed the isolation and marginalization of special education teachers by studying how these teachers spend their instructional time, which was significantly different than perceived by the general education teachers and administrators.

Brown et al. (2008) found that embedding special education training in teacher education programs improved the attitude of general education teachers as well as their willingness to work in an inclusive model. A study by Gürgür and Uzuner (2010) found a similar attitude difference when general education teachers felt adequately trained and prepared to work with students with special needs.

Although attitudes toward the inclusion of students with special needs in general education classrooms are a critical element to success, Berry (2006) found that it was not the only critical element. Berry's observations of a class taught by two teachers with positive attitudes toward inclusion of students with special needs in their classroom found that in spite of the positive attitudes of the

teachers, there were other equally important elements to success, including awareness of classroom assumptions about difference and disability.

These studies suggest inclusion of students with special needs in general education classrooms produce positive social and sometimes academic results for these students. In order for an inclusive model to be successful, a culture of cooperation, collaboration, and achievement orientation is necessary, along with adequate teacher training and administrative support. Attitudes of the educational community, as well as parents of students in both general education and special education, reflect a belief in the potential success of inclusive models of education, but educators also recognize the need for the creation and presence of the appropriate structure and culture for success. It comes down to the culture of the building and, ultimately, the district. When all teachers view all students as their responsibility, and view the school as a community, more students of more abilities grow and are successful.

Suggestions for Further Research

The strongest recommendation for further study is more longitudinal research that takes place in inclusive settings exemplifying best practices for that model, so the outcome is more accurate for the specific conditions. Only Ryndak et al. (2010), one study of the thirty contained in this paper, followed the participants through their educational careers and beyond, for a more complete picture of the effects of different educational settings. Most of the studies encompassed two years or less, giving rise to questions about validity of results because the small span of time could yield results for children that are solely

related to the moment in time. When studied over longer periods, the changes in behaviors and development can be more accurately attributed to external variables.

While studies reviewed here had their own strengths, many did not include demographic data regarding race, socioeconomic status or location of their subjects. Generalizability is difficult when this data is missing. It makes it impossible to duplicate the study and further confirm or disprove research results. Similarly, when researchers do not include information about how they coded and analyzed data, the findings are less transferable, and credibility is weakened. Because so many of the studies in this paper rely on interviews, surveys, observations and questionnaires, transparency about coding of data is critical for both credibility and understanding, therefore transferability. Several of the studies reviewed here lack sufficient information about coding and analysis of data.

More research is needed involving many more individuals with special education needs. Studies included in this paper were limited to small geographic areas and used small samples for study. Fuchs (2003) studied only five subjects from a single small area of the United States, Fisher and Frey (2001) had only three subjects from the same school district, and Cesar and Santos (2006) studied only four students in the same school. Additionally, more focused longitudinal studies are needed on specific academic achievement of students with special needs, rather than studies where the focus is primarily on social

gains. Finding research that specifically addressed academic gains relative to inclusive practice was difficult.

Conclusion

Chapter one examined the practice of inclusive placement of students with special needs in a general education classroom setting, and the benefits thereof. While data was presented that found no positive effect of inclusive settings, the majority of the data supports better social and sometimes academic outcomes for students with special needs when educated in inclusive settings. The rationale for finding how to use the practice of inclusion to create an optimal learning experience for students with special needs is also presented in chapter one. This rationale is presented as a way to raise the achievement of these students with special needs academically, and to socially better prepare them for adult lives within society, not on the periphery.

Chapter two reviewed research into the effects and outcomes of students with special needs education, in inclusive general education classroom settings. Some studies compared the outcomes for those educated in self-contained or pull-out settings. Chapter two also reviewed research where outcomes for all students were exceptionally positive and found protocol that facilitated such outcomes. Finally, research about attitudes toward the practice of inclusion was reviewed, to determine if attitudes of professionals and parents are barriers to implementing inclusion models of education for students with special needs.

Chapter three was the final chapter of this paper. It summarized findings reviewed in chapter two, in the same areas of effects of inclusive education for

students with special needs, best practices of those models, and attitudes toward inclusive education. The findings indicate that including students with special needs in the general education curriculum, using best practices of a collaborative, cooperative culture where high achievement is valued and expected and staff are adequately trained, produces positive academic and social outcomes for these students. Only two studies found no or a negative correlation between inclusive education and social and academic outcome. Research also found that attitudes toward inclusive education of students with special needs are positive, but that attitudes are also doubtful regarding successful implementation.

Although the examination of these studies supported the conclusion of positive outcome for education of students with special needs in an inclusive setting, there is still much more research needed. The academic outcomes need to be more thoroughly and specifically addressed, and further research is needed in larger populations and more diverse geographic areas. Longer studies, following students through their educational careers and into adulthood, would also be helpful to fully understand the long term benefit of inclusive education.

While more analysis is undoubtedly needed before inclusive education of students with special needs becomes a common practice in the public schools of the United States, the review of the research analyzed in this paper presents convincing evidence that inclusive practice does positively affect the social and academic outcomes for students with special needs when implemented in a

collaborative, cooperative community. Community attitudes are supportive of this practice which will be a transformative experience for students of all abilities.

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