THE EFFECTS OF INCLUSION PRACTICES ON THE EMOTIONAL GROWTH AND ACADEMIC ACHIEVEMENT OF ELEMENTARY STUDENTS

by

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ABSTRACT

Students who receive special educational services are more frequently placed full-time in general education classrooms. It is important that educators evaluate the effects of inclusion practices on the emotional growth and academic achievement of all students. This review intends to discuss research that has sought to evaluate the effects of inclusive classroom practices on students and to extrapolate viable classroom practices to maximize social and academic success of inclusion. The findings suggest that the inclusion of students with learning challenges in the general education classroom has a positive impact on academic achievement and social interaction of all students, but poses a threat to the development of self-concept, self-esteem and self-worth in students with learning challenges. The research implies that intentional cooperative-learning experiences can be beneficial to both social and academic development. This literature review finds that further research is necessary that examines social relationships beyond friendship nominations and also further research into curriculum differentiation.

Keywords: inclusion practices, social development, cooperative learning

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CHAPTER 1: INTRODUCTION

Introduction

Educational theorist John Dewey argued that the classroom should replicate the democratic nature of our society (Dewey, 1938). The introduction of inclusion in schools was meant to create equality and provide social interactions for students of all backgrounds and abilities. In 1954, Chief Justice Earl Warren's judgment of Brown vs. Board of Education stated: "Separate educational facilities are inherently unequal. This inherent inequality stems from the stigma created by purposeful segregation which generates a feeling of inferiority that may affect their hearts and minds in a way unlikely ever to be undone" (as cited in Black, 2010, p. 87). In the sixty years following this judgment, legislation has been mandated and schools have worked to adapt to the inclusion of all students.

Brown vs. the Board of Education opened general education classrooms for students of different, and paved the way for students with learning challenges to receive their rightful education in the least restrictive environment. To what extent have these programs been successful in creating an increasing sense of equity and democracy? Furthermore, what are the implications of inclusion on the social development of elementary students? This first chapter will begin by examining the relevance of this question for students, teachers and the educational community. Then a discussion of controversies and conflict with inclusion will be presented, followed by an overview of the history and societal context of inclusion. It will then define terms that are relevant to the subject and

portray the limitations of this study. This chapter will conclude with a summary of the above information and an overview of chapters two and three.

Rationale

Teachers with certification in general elementary education are being asked to educate students with a variety of learning difficulties, and it is necessary that teachers prepare themselves to provide the same quality and standard of education to students of all abilities. It is also necessary that teachers prepare their classroom to face the social challenges that may arise, and in the case of inclusion, this means fostering a sense of belonging and also a celebration of diversity (Korinek, L., McLaughlin, V., Walther-Thomas, C., Williams, B., 2000).

In an era of increased accountability it is ever more important for the educational community to remember the foundational roots of including students of all abilities in the same institution. In 1990 the Individuals with Disabilities in Education Act was passed, mandating the guarantee of free and appropriate education for all students with disabilities. This legislation led to a steep increase in educational spending at a federal and state level. When No Child Left Behind was passed in 2002, new levels of accountability threatened cuts to federal funding, and schools struggled to prepare all students to pass mandated standardized tests. Often schools simplified their standards for a better chance of receiving a passing grade, instead of focusing on challenging students to learn what they are capable of. This policy requires all students to be proficient in math and reading, regardless of whether students have the abilities necessary to

become proficient in these subjects (Ravitch, 2010). This legislation has created a fear within schools and many teachers are reluctant to have students with Individualized Education Plans in their classrooms who may lower their test scores and threaten their employment.

The standardized tests that assess accountability also have negative implications for how students are selected for special services. Often standardized tests are used to label students with disabilities, and it is argued that the decontextualized nature of these tests have led to the disproportionate representation of minority children in special education (Kugelmass, 2004).

Paul Cooper argued that the idea of creating completely inclusive classrooms is misguided and ignores the diverse nature of schools. Legislation mandating inclusion programs disregard the schools' inability to provide for all students regardless of their needs, as it is impossible for public schools to obtain the funding and space to provide the resources necessary for all disabilities and needs. The widely diverse educational and emotional needs of students receiving special education services make it difficult to dichotomize the issue- it is difficult to say whether inclusion is beneficial for all or no students, yet this is what education reform has continuously worked to prove. Students with special needs often pay hefty lifelong prices for the deficits of inclusion, which can lead to "the wastage of human talent and a lifetime of unfulfilled potential" (Cooper, 2011).

Historical Background

The path toward inclusion in American Public Schools has been a long journey of legislation and action of the people. Special education in America was legitimized by President Herbert Hoover, who in a White House Conference on Child Health and Protection stated, “For every child who is deaf, blind, crippled or otherwise physically handicapped, and for the child who is mentally handicapped, such measures as will [sic] early discover and diagnose his handicap, provide care and treatment, and so train him that he may become an asset to society rather than a liability. Expenses for these services should be borne publicly where they cannot be privately met” (as cited by Black, 2010, p. 83). Thus, special education practitioners began educating students with special needs in separate classrooms (Black, 2010).

The civil rights movement provided the necessary momentum for citizens with disabilities and their advocates to demand the right to fair education. Throughout the 1960s and 1970s, increasing testimony unveiled that many children with disabilities were excluded from the public education system, and those included were usually in segregated classrooms with limited services (Lipsky, 1989). During this time state law worked to provide better services for students with disabilities, but the small changes did not appease advocacy groups. In 1975 the Senate passed the Education for All Handicapped Children Act. This act eliminated the choice of whether schools would provide education for students with disabilities. The third principle of this law advocated for the normalization of services for students with disabilities, and stated that students

with disabilities may not necessarily need to be removed from the general education classrooms to receive proper education (Lipsky, 1989).

In the 1980s the Regular Education Initiative passed which recognized that the integration of students with special educational needs required a complete integration of regular and special education systems. It proposed collaboration between general teachers and specialists, but failed to reach its intended goals by the 90s (Kugelmass, 2004).

In 1990 the Individual with Disabilities Education Act (IDEA) was passed that guarantees students with disabilities the right to fair and unbiased assessment, free and appropriate education, and confidentiality (Korinek et al., 2000). IDEA involves students who receive special services in general education curriculum, assessments, and classrooms. In 2002 the passage of No Child Left Behind reinforced the belief that segregation impeded rights to education to all individuals, and began to hold schools accountable for the achievement of students who receive special services. This legislation has altered education's goals to be more outcome-oriented (Nevada Partnership for Inclusive Education, 2011).

Definitions

Before taking a critical look at the research in this subject, some terms must be defined from the perspective of this particular piece. First the terms related to inclusion will be defined, followed by the definition of terms related to social development and perception. For the purpose of this project the term **students with disabilities/learning difficulties** will be used for students with

various impairments and/or difficulties that challenge participation in education (Flem, A., Frostad, P., & Pijl, S., 2008, p.388). Various other terms are used throughout the paper based upon the nomenclature chosen by particular groups performing the studies reviewed. This paper will not look at different learning challenges individually and will consider the effects of inclusion education on students of many different backgrounds, challenges, and ability levels. However, it is important to note that the American Psychological Association advised that the term “special” is a euphemism that is condescending and should be avoided when describing individuals and instead suggests using people-first language such as people with learning disabilities (American Psychological Association, 2010).

There are many definitions of the term **inclusion**, and this paper will take an integrative definition as follows. One definition defined an inclusive learning environment as one in which everyone belongs, is accepted, supports, and is supported by his or her peers and other members of the school community in the course of having educational needs met (Korinek et al., 2000). In 1997 UNESCO released a comprehensive definition which described some of the critical attributes of a successful inclusion classroom: all children will receive instruction in the same classes they would attend if not disabled or educationally disadvantaged, specialists will provide support in general education settings and work closely with classroom teachers, all students are to be held to high expectations while recognizing the need for individualization, and that diversity is an enriching educational experience for all children (Kugelmass, 2004).

An **Individualized Education Plan** (IEP) is a written statement that identifies the disability label, educational and social learning goals, educational placement, and specification of services for children with additional learning needs (Cosier, 2010).

The following are terms related to social perception and strategies useful to social development. **Collaboration** refers to the ongoing participation of multiple people committed to working together to achieve common goals (Korinek et al., 2000). **Cooperative Learning** is a teaching model, "which presents opportunities for students of varying backgrounds and conditions to work together on common tasks, and through the use of cooperative reward structures, learn to appreciate each other. (Arends, 1997, p.112)" **Peer acceptance** refers to the level at which students are considered socially included and is indicated by being accepted as a member of a group, having at least one mutual friendship, and/or participating actively and regularly in group activities (Flem et al., 2008). **Interpersonal attraction** refers to the interaction between students who have differences, and in many of the studies in this review, it refers to the interaction between students with and without disability. This study will also examine the **self-concept** of students, which is the idea of self, constructed by personal beliefs and the interactions with others. **Status** is an agreed-upon social ranking that exists between individuals and in the classroom, which has the ability to determine whether students perceive one another as capable of completing an intellectual task (Cohen, 1994).

Limitations

This review intends to examine the impacts of inclusive classroom practices on students' social growth and academic achievement, and is limited only to peer-reviewed research published in English. The scope of this paper examines the social and academic growth of students with and without learning difficulties, which is defined in a variety of ways that varied study to study. Time has also changed the definitions of learning disabilities and types of impairments that change the services and accommodations provided as well as how students are identified when chosen for research. The term "special needs" ranges a large spectrum and this review looks at a wide and generic range of students who receive special services, and therefore cannot be directly applied to a specific learning need. It is meant to give an overall look at social perceptions of inclusion elementary classrooms and considers ways in which these findings can relate to effective classroom practice.

Summary

The following is a summary of the above chapter and a general outline of the paper that is to follow. This project's aim is to look at the implications of inclusion on the social development of elementary students, and determine effective classroom practices to support social and academic growth. Inclusion has evolved in response to the collaborative demands for equal rights to education for people with disabilities and their advocates, and through the past century the educational community has critically examined and retailored its structure to fit the needs of changing populations. As populations of students who

receive special services increase general education teachers are facing a higher responsibility to differentiate instruction to fit learners of all abilities. Accountability laws such as NCLB further complicate the teachers' roles as they work to provide quantified proof of the acquisition of learning objectives.

Chapter Two will provide an integrative review of professional literature representing various schools of thought on the premise of the social effects of inclusion. Thirty studies that examine the effects of inclusion practices on the social and academic development of students will be critiqued. Chapter Three will connect the review to this original rationale and determine effective classroom practices for creating a classroom that nurtures the social and academic development of students of diverse abilities.

CHAPTER 2: CRITICAL REVIEW OF THE LITERATURE

Introduction

Chapter one discussed how classrooms have become more inclusive of students with alternate-abilities, the controversies and conflict of the inclusion of students with learning challenges into the general education classroom, and also gave an overview of the history and societal context of the inclusion of students with alternate abilities in the general education classroom. Chapter two will provide an integrative review of professional literature representing various schools of thought on the premise of the social growth and academic achievement effects of inclusion. The research in this chapter is organized into three main sections: inclusion's effects on students' self-concepts, its effects on the classroom community, and finally inclusion's effect on learning and teaching. Each study will be summarized and critically analyzed based upon its findings. The research is reviewed to examine the outcomes of inclusion programs for a variety of settings.

Inclusions Effect on Self-concept

This first section will analyze the effects inclusion has on the self-concept development of students. Many of the studies examined the development of self-esteem, attitudes or changes in behavior that occur as a result of inclusion. Daniel and King (1997) studied the impact of inclusion education on student behavior and self-esteem with students from third- to fifth-grade and found that students in inclusion classrooms reported lower levels of self-esteem and higher instances of problem behaviors in third-grade students, but fewer behavior

problems in fifth-grade students. Bear, Clever and Proctor (1991) studied if the same domains were equally important in determining global self-worth among both nonhandicapped students and students with disabilities in third-grade classrooms and found that female students with learning disabilities had the poorest self-esteem, and that boys generally had a higher level of self-worth. Cesar and Santos (2006) studied the contributions of collaborative work to the promotion of more inclusive learning settings with eighth- and ninth-grade students who were apart of the *Interaction and Knowledge* research project and found that students with special needs' confidence grew over a one-year period. Johnson, Johnson, and Rynders (1981) compared the impact of cooperative, competitive, and individualistic situations on the self-esteem of general education junior high schools students and severely handicapped students place in the same program in the Midwest and found that students in the cooperative condition had higher self-esteem and perceived the teacher as being more personally accepting.

Daniel and King (1997) used quantitative measures to look at the impact of inclusion placement on students with disabilities and its implications on parental concern, problem behaviors, academic performance, and self-reported self-esteem. The sampled consisted of three groups of students from third- to fifth-grade. Group one (n=68) was from four non-inclusion classrooms, group two (n=34) was from two clustered inclusion classrooms, and group three (n=105) consisted of six random inclusion classrooms.

The researchers used a quasi-experimental design comprising of third-

through fifth-grade students (n=207) from twelve intact classrooms, eliminating the possibility of random assignment of participants. The experiment consisted of four variables. One variable was parent concerns about their children's school program. This variable was operationally defined as parents' total scale score on a 22-item attitudinal questionnaire that was developed as part of the study. The second variable was teacher and parent reported instances of student behavior problems using subscales of the Children Behavior Checklist. The third variable was students' academic performance using the SAT. The final variable was students' self-reported self-esteem using the Self-Esteem Index.

Complete TRF, SEI and SAT data were available fro 178 of the 207 students, including 63 third-, 52 forth-, and 63 fifth-grade students. The analysis from the third-grade cohort yielded an effective size of 34.6% (Wilkes's lambda= .6563), p<. 01, indicating statistically significant difference in the performance of the non-inclusion and random inclusion students at this level. Similar results were noted in the forth-grade cohort in the performance of students in the non-inclusion and random inclusion classroom. Inspection of the third-grade group means indicated the students from the inclusion classrooms experienced higher gains in reading achievement and more behavior problems than their peers in non-inclusion classrooms. The inclusion students reported lower levels of self-esteem. The fourth-grade classroom's mean scores indicated that the non-inclusion students had higher mathematics gains and higher peer popularity and self-esteem scores than did their counterparts in the inclusion classrooms. Finally, the fifth-grade classroom reported fewer behavior problems for students in the random inclusion

classrooms.

Inspection of the structure coefficient and group means indicate that the non-inclusion parents differ from the two groups of inclusion parents primarily with respect to their perceptions of their children's internalizing behavior problems with their concerns with the effectiveness of the school program. The inclusion parents were more likely to report more behavior problems and greater concerns with the program effectiveness.

Bear, Clever and Proctor (1991) studied whether the same domains were equally important in determining global self-worth among both nonhandicapped students and students with learning disabilities. The participants of the study were four hundred third-graders enrolled in five elementary schools randomly selected from the Christina School District in Newark, Delaware. The majority of children lived in middle class homes in neighborhoods bordering their school, however, twenty percent of the children were bused from a nearby city. Sixty of the students in the study were nonhandicapped males who were in classrooms without an inclusion program. Sixty-four students were female students in classrooms without an inclusion program. The study's sample consisted of seventy-nine boys and eighty-four girls classified as nonhandicapped in the classrooms that integrated students with learning disabilities. Fifty-two of the students from the classrooms with inclusion programs had learning disabilities, forty-three were males and nine were females. These students were identified as learning disabled in accordance with the criteria set forth by the Delaware Department of Public Instruction.

Bear et al. (1991) had participants complete a SPP-C survey that consisted of six empirically derived subscales. One subscale measured the global self-worth of the child and the five others assessed the children's self-evaluations of competence or adequacy in specific domains: scholastic competence, athletic competence, physical appearance, and behavioral conduct. Each subscale contains six items. The survey was administered in April or May in each classroom by two trained graduate students. The items from the survey were read aloud and students having difficulty filling out the form were given assistance.

In analyzing the data the Cronbach Alpha ranged from .58-.79 for the nonhandicapped nonintegrated group, .64-.79 for the nonhandicapped integrated group, .56-.78 for the learning disabled and integrated group. Alphas were lower in reliability for athletic competence for the students with learning disabilities as were the alphas of the scholastic competence for the nonhandicapped nonintegrated group. The findings stated that the students with learning disabilities scored lower than non-handicapped classmates in self-perceptions of scholastic competence (t (336)=. 183,p<. 05), behavioral conduct (t (336)=. 248,p<. 01), and global self-worth (t (336)=. 261,p<. 005). Differences between the two groups of students without handicap were not statistically significant. Bear et al. (1991) also found that girls with learning disabilities had poorer self-perception of physical appearance compared to both groups of girls without handicap.

Cesar and Santos (2006) used a critical and ethnographic approach to

study peer interactions. They formed the study using Vygotsky's theory that learning should be seen as a communicative process. Data was collected through observation, questionnaires, projects, interviews, reports, and materials gathered by participating teachers. The study examined how inclusion is shaping education, and how collaboration promotes more positive attitudes toward academic learning and socialization.

The sample consisted of one student with special educational needs in a group of four ninth-grade students (13/15 years old) that had been part of the Interaction and Knowledge research project since 8th grade. The teacher had 23 years experience but this was her first experience as a teacher/researcher. Several observers went to some of the classes, as well as external evaluators.

Data were collected through participant observation, digital photos, questionnaires, interviews, talk inspired by projective techniques, student's work, academic documents, and teachers' and evaluators' reports. Data discussed included questions of peer interaction audiotaped during mathematics class, and interviews with these students. During the first week of the study, 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. At the end of the first term interviews were completed and then again at the end of the school year. Interviews were analyzed individually and then discussed by the research team.

In these collaborative learning groups, students would complete mathematics tasks and were not able to move on to the next mathematical concept until all group members understood the questions. The findings stated that they employed dialogue and teamwork to help one another learn. Three group members protested to the inclusion of a student with special educational needs in their group, but the study stated that soon the group members took pride in helping him grasp concepts. Throughout the year, the student with special educational needs' confidence grew and in a one-year post-assessment he was still grateful for the collaborative learning environment, claiming that in his current tenth grade class, "everyone fends for himself." One student with non-special educational needs claimed that she was amazed at the friendship she had formed with the student with special educational needs, and that she felt that she would, "never have a class that good again."

Johnson, Johnson and Rynders (1981) compared the relative impact of cooperative, competitive and individualistic learning experiences on the self-esteem of junior high school students of different abilities. The sample consisted of thirty junior high school students (18 female, 12 male) in a metropolitan area. Nine of the students were from public schools, nine were from Catholic schools, and twelve students were from a school for the severely handicapped. These twelve students were chosen on the basis of a diagnosis of Down syndrome. The students without handicaps were chosen on the basis of having little previous bowling experience and as being interested in learning how to increase their performance in bowling. The students with handicaps were chosen on the basis

of being able to understand basic instructions given in the study and their ability to verbally communicate their needs. In addition, the teachers who chose the students participants chose students who were relatively free of aberrant behavior.

Subjects were randomly assigned to conditions stratified for handicap and sex; ten subjects were in each condition. Of these ten, six were students without handicap and four were students with handicaps. The independent variables comprised of the individualistic, cooperative, and competitive learning experiences. Students in the individualistic group were instructed to maximize their individual scores, setting a goal of ten pins improvement per week. Students in the cooperative model were instructed to maximize their group bowling score. Students in the competitive model were instructed to maximize their individual score, and then scores were ranked at the end of the lesson. At the end of the study students completed a self-esteem and teacher acceptance scale.

The findings showed that students in the cooperative condition had higher self-esteem, F (2,24)=3.202,p<. 06(COOP H=.91, NH=.61; COMP H=.58, NH=.38; IND H=.75,NH=.72), and perceived their teacher to be more personally accepting, F(2,24)=2.42,p<.11(COOP H=.87, NH=1.00; COMP H=.62, NH=.58; IND H=.75, NH=.75), than did students in the other two conditions. Overall, handicapped students reported higher self-esteem than did nonhandicapped students, F (1,24)=2.81,p<. 10.

One weakness of this study was the specification for choosing students for the study. Handicapped students were chosen on the basis of being free from

aberrant behavior. Therefore, this study can only be valid in considering students with handicaps who behave only in ways deemed normal by their classroom teacher.

Inclusions Effect on Classroom Community

The prior section of this chapter analyzed the effects of inclusion on self-concept development in students. This section will look at the implications of inclusion on the classroom community. It will accomplish this first by analyzing studies that focused on peer acceptance, interpersonal attraction, and social interaction. This section will also review studies that determine the rejection and conflict experienced by students.

Peer Acceptance

Campbell (2010) studied the level of service delivery's impact on the intent of non-disabled students to include their peers with disabilities in third- to fifth-grade classrooms and found that inclusion, whether part- or full-time had statistical significance on the positive impact of students' intent to include students with disabilities regardless of the socioeconomic status of the community members represented in the school's population. Favazza, Kumar and Phillipsen (2000) studied the changes of behavior among preschool and kindergarten students with and without disabilities while participating in the Special Friends intervention and found that children without disabilities participating in the intervention group reported greater acceptance of children with disabilities.

Campbell (2010) applied the Theory of Planned Behavior to examine the impact of classroom inclusion on elementary school students. The Theory of Planned Behavior postulates that mediating variables in one's intent to do something include a consideration of implications: including one's attitude, and a belief that one can carry out the behavior. The researchers looked to see if the level of service delivery impacted a nondisabled child's intent to include peers with disabilities. Campbell's study employed an exploratory analysis of the perceptions of non-disabled fourth- and fifth-grade students as they consider their relationship to peers with disabilities. The unit of analysis for this study was the individual students and their reported perceptions. The sample for this study included third-, forth-, and fifth-grade elementary classrooms across four service delivery models across two counties in Florida. The researchers used a convenience sample and reported that they made every reasonable effort to create robust and diversified sample of schools. The sample size consisted of 936 students from 52 classrooms. The sample consisted mainly of fourth- and fifth-grade (89.7%) caucasian (58.4%) females (53.6%). Written interviews were completed with 46 teachers.

Campbell (2010) obtained data through a parent and student sample survey booklet. 593 of the surveys were completed of the originally sample of 936, giving a response rate of 63.4%. The researchers used an analytic design and collected interval and ratio level data as well as multinomial logistic regression. The dependent variable was the intent to include as defined by the Theory of Planned Behavior. The independent variables were the physical

inclusion of students with disabilities in class with nondisabled peers (integration) and efforts to promote relationship building (interaction). The contextual variables included teacher and parent attitudes, individual characteristics (age, grade level, gender, prior experience), and school level characteristics (racial demographics and percent of economically disadvantaged).

Campbell's (2010) findings suggested that inclusion, whether full-time or partial is statistically significant in its impact on student's intent to include students with disabilities. Findings indicated that a students external exposure to individuals with disabilities in their home setting were statistically significant in students' intent to include. The data also suggested that children seem to express positive levels of intent to include students with disabilities regardless of socioeconomic difference.

Favazza et al. (2000) examined the effectiveness of the Special Friends Intervention program on the acceptance of young children with disabilities. The sample consisted of 64 kindergarten students without disabilities (32 girls, 32 boys). Families transitioning out of district lowered the number of participants to 57. One participant was caucasian, 63 were African American, and 98% received free lunch. In this second group 32 preschool children with disabilities were included (16 girls, 16 boys). The children were between the ages of four and six. 16 of the participants had moderate mental retardation, 4 participants had severe mental retardation, 5 participants had developmental delay, 4 participants had speech and language delay, 1 had Down syndrome, and 1 had Nonnan's syndrome.

The researchers modified the Acceptance Scale for Kindergarten to achieve a Cronbach alpha of .87. A Teacher Impression Scale was also administered to determine the level of student compliance. The sample size was divided into four groups. One group, called the Whole Intervention Group, received all aspects of the Special Friends Intervention program that included storytelling discussion, structured play with students with disabilities, and a reading activity at home once per week. One group received only the playgroup with students with disabilities. One group only received the storytelling discussion aspect of the intervention. There was also a control group that received no intervention.

After the six-week intervention, children participating in the Whole Intervention Group, reported greater acceptance of children with disabilities than did the playgroup, story group, and control group. Students in the control group reported fewer acceptances than any other group.

Interpersonal Attraction

The following studies examine inclusive practices effects on interpersonal attraction of peers with and with learning disabilities. Johnson and Johnson (1981) studied the effects of cooperative and individualistic learning experience on the interpersonal attraction between handicapped and non-handicapped third-grade students and found that there were more friendships and time spent interacting during post-instruction between nonhandicapped and handicapped students in the cooperative learning group. Johnson and Johnson (1984) studied the effects of cooperative learning on the social interactions of nonhandicapped

fourth-grade students and lower-achieving handicapped peers and found that students in the cooperative condition spent more time with cross-handicapped peers during post-instructional free-time. Johnson and Johnson (1982a) studied whether cooperative learning experiences promote interpersonal attraction between handicapped and non-handicapped eleventh-grade students in the Midwest and found that nonhandicapped peers were more accurate in taking the perspectives of handicapped peers than students in the individualized instruction group. Johnson and Johnson (1982b) studied the impact of cooperative learning experiences on cross-handicap relations in three fourth-grade classrooms and found that there were more interactions between handicapped and nonhandicapped students in the cooperative condition in post-instructional free-time.

Johnson and Johnson (1981) studied the effects of cooperative and individualistic learning experiences on interpersonal attraction between handicapped and non-handicapped third-grade students. The subjects of this study consisted of 40 third-grade students from three different classrooms. Of this sample, eight (five male, three female) were identified as having severe learning and/or behavior problems. These students were referred to special education services for reading, mathematics and behavior problems. They were 2 years or more academically behind their classmates (as measured by a sociometric roster-rating questionnaire). All students were randomly assigned to either a cooperative of individualistic condition, stratifying for sex, ability (as determined by a sociometric roster-rating questionnaire). Four handicapped

students were randomly assigned to each condition. There were an equal number of high-, medium-, and low-ability students in each condition, and there were an equal number of well-liked, medium-liked and low-liked students assigned to each condition.

The independent variable consisted of a cooperative and an individualistic condition. In the cooperative condition, students were instructed to work together as a group, completing one assignment sheet while ensuring that all group members mastered the assigned material. Students in this condition were encouraged to share ideas and suggestions with one another, and the teacher praised and rewarded the group as a whole. In the individualistic condition, students were instructed to work on their own, avoiding interaction with other students, and with the teacher praising and rewarding each student individually. Students in each condition were together 25 minutes a day for 16 instructional days. The mathematics curriculum was identical for the two conditions. Each day the teacher explained the day's assignment to students, distributed the appropriate material, and reviewed the condition's goal structure. At the end of the study the students responded to an experimental questionnaire. Two teachers participated in the study. One teacher was the students' regular teacher and one teacher was a certified teacher hired to conduct the study. The teachers switched conditions midway through the study so that both teachers spent an equal amount of instructional time in each condition.

The dependent variables were: off-task behavior, interaction of handicapped and non-handicapped students during instruction, cross-handicap

interaction during free time, a sociometric measure of cross-handicap liking, and three attitudinal scales. The observers first recorded whether a target student's behavior was off-task. If the behavior was on-task, the nature of the behavior was divided into the following categories: questions, leads, help and assistance. A sequential time-sampling method was used for the observation during which a student was observed for 10 seconds.

The first dependent variable examined the interaction between handicapped and nonhandicapped students during instruction. In the cooperative condition, compared with the individualistic condition, nonhandicapped student asked their handicapped peers more questions, addressed more directions and suggestions to them, provided more help and assistance to them, and tended to encourage them more. On average, eight verbal comments were directed to handicapped students in the cooperative condition and only two such comments in the individualist condition. This finding is weak however, due to the threat to internal validity represented in the cooperative condition. Students in this condition are encouraged to interact with one another, so it is an obvious result of the condition that the students interact more. At the same time, the findings do suggest that if it is desired that students interact with one another, we should encourage that they do so.

The third variable examined the interaction between nonhandicapped and handicapped students in post-instructional free-time sessions. There were more cross-handicap interactions in the cooperative than individualistic condition. The fourth variable also determined that there were more cross handicap friendships

as determined by a sociometric nomination of friends. These findings indicate a positive correlation between inclusion, cooperative-learning environments, and cross handicap interaction.

Johnson and Johnson (1984) completed another study assessing cross handicap interactions by testing whether nonhandicapped students reject or dislike lower-achieving handicapped peers in a 2x2 ANOVA designed experiment. The students in this study consisted of 48 fourth-grade students from two different urban classrooms. Of the sample 12 students had handicaps, 36 were nonhandicapped. All students were randomly assigned to either a cooperative or individualistic condition, stratifying for handicapping conditions, sex, social class, and ability level. Each group represented 6 students with handicaps, 13 females, 11 males, 12 middle class, and 12 lower class. Students in the cooperative condition were placed in groups of four, and students in the individualistic condition were instructed to work on their own and to avoid interaction with other students.

Four research assistants observed oral interaction in both conditions daily. All assistants received training on instruments until their interrater reliability was 80%. The dependent variables consisted of achievement, oral interaction, social-schema measure of interpersonal attraction, a distance-density measure of interpersonal attraction, a sociometric-nominations measure of giving and receiving help, and several attitudinal scales.

Students in the cooperative learning environment achieved higher than those in the individualistic condition ($F_{1,44}=3.69$, $P<.10$. Students within the

cooperative learning environment also spent more time interacting with cross-handicapped peers during post-instructional time.

Johnson and Johnson (1982) studied the effects of competitive and cooperative learning experiences on the interpersonal attraction between handicapped and nonhandicapped students. The subjects were thirty-one students from eleventh-grade classrooms in a midwestern school district. Six of the participants were students with handicaps. Two teachers were involved with the study; both received sixty hours of training and were randomly assigned to conditions. The independent variable was the learning environment; the conditions represented were cooperative- and individualistic-learning environments. Three students with handicaps were assigned to each condition. In the cooperative environment students were instructed to work together as a group, completing one assignment sheet while ensuring all group members mastered the material. The teacher praised the group as a whole. In the individualistic condition students were instructed to work on their own, avoiding interaction with other students. In this condition the teacher praised students individually.

Students were in each condition for 55 minutes per day for sixteen instructional days. The math class started eight weeks prior to the study. The dependent variables included perspective taking accuracy, off task behavior, in-condition observation of cross handicap interaction, a sociometric measure of cross handicap liking, achievement, and four attitudinal scales.

The study found that interpersonal attraction between handicapped and nonhandicapped students was greater in the cooperative learning model, and that nonhandicapped students found handicapped peers to be more desired as work partners than did students in the individualistic condition T (29)=2.72, p<. 01. Analysis of the accuracy of perspective taking by nonhandicapped students found that students in the cooperative condition more accurately (90%) took the perspective of their handicapped peers than did nonhandicapped peers in the individualistic condition (66%). The study also found that students in the cooperative learning model tended to achieve somewhat higher than the individualistic condition F (1, 18)=2.68,P<. 10. This increase in achievement was even greater for students with handicaps.

The researchers strengthened their study by conducting experimental checks on a daily basis. They also provided and documented ample training for teachers in both experimental conditions.

The dependent variables analyzed in this study flawed the internal validity of the findings. At the start of the study, students in the individualistic conditions were asked not to interact. Students in the cooperative model were placed into learning situations where they must interact in order to accomplish their tasks. By analyzing the amount of cross-handicap interaction in these conditions, the design of the experiment sets the cooperative model to inherently exhibit greater amounts of cross-handicap interaction.

Johnson and Johnson (1982b) completed yet another study that examined the effects of cooperative and competitive learning experiences on interpersonal

attraction between students with and without handicaps. Students in this study were from three fourth-grade classrooms at a large elementary school in a metropolitan school district in the midwestern region of the United States. The study consisted of fifty-one students, ten of whom had learning disabilities. Of the students with learning disabilities, five were African American and eight were boys. All of these students were randomly assigned to the two conditions stratifying for sex, ability (determined by the teacher), ethnic membership and handicap. The independent variable consisted of two conditions, a cooperative and a competitive learning environment. In the cooperative learning model, students were instructed to work as a group. Students in the competitive model were told to work alone in attempt to do better than their classmates, and to seek help and clarification only from the teacher. In each day there were forty-five minutes of instruction time, followed by ten minutes of free time. At the end of the study the sociometric and attitude scales were given to all students. The dependent variables were free time observation, sociometric scales that assessed helping, liking for each other and liking for the group product, cooperative and cohesion scales. An ANOVA analysis was completed on the observational data to see whether interactions were cross-handicap.

The findings of this study concluded that there were more interactions between handicapped and nonhandicapped students in the cooperative model's ten minute free time sessions, $t(18)=1.72, p<.05$. Another finding was that more nominations for cross handicap help existed in the cooperative model than the competitive, $t(42)=1.62$, $<p.10$. This last finding threatens the credibility of the

study, in that the participants in the competitive model were discouraged from interacting or for asking peers for help.

A strength of these series of studies completed by Johnson and Johnson is the reliability portrayed in the findings. The findings of these studies pointed to the increased interaction between students with disabilities and students without disabilities outside of instructional time. Also, the use of ANOVA analysis and quantifiable surveys increases the objectivity of these studies.

Social Interaction

The following studies examine the social interaction between students with and without learning challenges. Berry's (2006) study of the efficacy of establishing a community ethos in a second- to fourth-grade integrated classroom found that higher status students would manipulate the words of teachers to get what they wanted in small groups. Antia and McCain (2005) studied the difference in communication participation and social behavior of Deaf or Hard-of-Hearing students, Deaf or Hard-of-Hearing students with additional disabilities and non-disabled students in an integrated 3rd, 4th, 5th grade classroom and found that students with additional disabilities expressed the greatest degree of negative feelings toward the classroom. Algozzine, Spooner and Spooner (2000) studied the social adaptation of children with learning disabilities in third- through fifth-grade at eight urban elementary schools and found that children with learning disabilities had great difficulty encoding benign intention cues than students without disabilities. Guralnick and Paul-Brown (1984) evaluated the communicative adjustments of nonhandicapped preschool

students addressing developmentally delayed companions and found nonhandicapped students were highly adaptive in communication strategies with handicapped peers. Roeyers (1996) studied the influence of nonhandicapped peers on the social interactions of children with pervasive developmental disorder in thirteen elementary schools in Belgium and found a significant increase in presocial behavior in groups that received the intervention of nonhandicapped peers. Guralnick and Paul-Brown (1977) studied the nature of verbal interactions that exist among handicapped and nonhandicapped preschool children found that nonhandicapped peers could accommodate the sophistication of their speech according to the developmental level of the children they were speaking to.

Berry (2006) examined the establishment of a classroom community ethos and its effect on how students interacted in small groups. Particularly, the researcher examined how higher status students used the community ethos to manipulate lower status students. The subjects of this study include two teachers and twenty-nine students. One of the educators was a general education teacher and the other is a special education teacher. The two work collaboratively to create an inclusive classroom. The focus classroom of this study was a second- through forth- grade integrated class with twelve special education students. A large portion of the discourse analysis focused on a female European American third grade student named Marta.

The researcher used ethnography to conduct a discourse analysis. She spent nine months audio recording and videotaping observations of the

classroom. The classroom was first observed for three consecutive days of constant recording. The research then returned for an additional two full days of videotaping and audio recording. During a seventeen day period the researcher also observed for eight half days, spanning over a unit on persuasive writing; a majority of the findings were based upon this time period. In addition to observations, two formal interviews were given to the teachers both before and after data collection. These interviews increased the confirmability of the study as the researcher used these interviews for clarification and additional questioning.

Analysis of the data examined both whole-class and small-group interactions. Berry found that higher status students manipulated words of teachers regarding the community ethos that was established in whole group-settings to get what they wanted in smaller groups. The study found that Marta was often marginalized in group settings when higher status students would tell her when it was appropriate to participate. The whole-group's goal for participation on a certain day was for everyone to participate in the group work activity.

Antia and McCain (2005) examined the communicative participation, academic achievement and social behavior of students in an integrated classrooms with five Deaf or Hard-of-Hearing students (DHH), five DHH students with additional disabilities (DHH-D), and eighteen non-disabled students in an integrated 3rd, 4th and 5th grade classroom. The researchers chose instruments that would measure communication participation, academic status, and social behavior of the students. Communication participation was measured using the

Classroom Participation Questionnaire (CPQ). Academic status was measured using the Academic Competence rating of the Social Skills Rating Scale (SSRS) and three consecutive years of Stanford-9 scores. Social behavior was measured using the Social Skills and Problem Behavior ratings from the SSRS.

For each scale the hearing students had the highest mean scores, whereas the DHH-D students had the lowest scores. All three groups characterized their ability to understand and be understood by their teachers as high, with mean scores between 3 and 4. (Scores above 3.0 were desirable on a four point scale) When evaluating their ability to understand and be understood by their peers, hearing students expressed the highest satisfaction, followed by DHH students. DHH-D students expressed the least positive feelings and the highest negative feelings toward the classroom.

Hearing students received higher academic scores than either of the two DHH groups. The DHH students scored in the low normal range (85-115), and the DHH-D students received below-normal range scores. The scores of the DHH students were not significantly different than the scores of either the hearing students or the DHH-D students.

The data indicated that, in most cases, the DHH students are performing below their hearing classmates and grademates in all three subject areas (math, reading, language) than their hearing classmates and grademates for all three years. The gap is generally larger between DHH students and their classmates than between DHH students and their grademates. Also, the gap is larger for reading than for math or language.

The teachers rated DHH-D students below average in social skills, although they rated themselves as average. All three groups of students rated their own social skills as higher than the teacher ratings. The means for problem behaviors indicated that all three groups scored in the average range. The DHH-D students, however, had the highest rating for problem behaviors.

The study found no significant difference in social participation between the DHH students and non-disabled students. Students with additional disabilities faced greater challenges than non-disabled students, but a smaller disparity existed between these students and DHH students. The findings suggest that this co-enrollment may be successful for integrating students with hearing loss and non-disabled students. However, these findings also suggest that hearing students in this setting received the most benefits of the educational environment. This may suggest that the communication complications related to hearing impairments become more challenging to accommodate for in an inclusive environment, especially when the student is Deaf or Hard of Hearing with additional disabilities.

Algozzine, Spooner and Spooner (2000), quantitatively examined the social perception and strategy generating skills of children with and without mental retardation in relation to the dynamic social environment of the classroom by presenting them with contrasting social cues and different types of social conflicts. The subjects (n=59) were elementary students with “mild mental retardation”, as defined in the study, who were withdrawn from a self-contained special education classroom in eight urban schools. The subjects represented 4

first-grade students, 10 second-grade students, 18 third-grade students, 21 fourth-grade students, and 6 fifth-grade students. The study did not identify what category of special need these students classified under, but did state that students were identified by school personnel as receiving special services and a recent standardized IQ test that indicated they had scores between 50 and 75, which is considered, "functioning within the range of mental retardation." Eighty-seven percent of the students were from ethnic minority backgrounds, but the study did not specify the students' ethnicity. Students without mental retardation were randomly selected from general education classrooms within the same school. Eighty-three percent of these students were from ethnic minority backgrounds. Four of these students without mental retardation were first-graders, 15 second-graders, 13 third-graders, 15 fourth-graders, and 11 fifth-graders.

Individual structured interviews were conducted with the students to assess their social-cognitive processing, social perception and strategy generation in social situations. In these interviews students watch video clips that represent conflict situations, and then an interviewer asked student what happened in the story. The interviewers then asked the students a series of questions regarding how they had interpreted the social situation in the video clip. Finally, to assess the children's strategy generation, the researchers asked, "what would you do if this happened to you?" The interviews were audio-recorded and coded by two coders without knowledge of the age and educational status of the interviewees. 3 of the 14 children, all of seven years of age, with

mental retardation had difficulty with performing the task and their interviews were not included in the analysis.

The researchers analyzed the social perception and strategy generation of interviewees, and used these comparisons to perform a series of ANOVAs in which the group and grade were between-subject variables. The findings stated that children with mental retardation had greater difficulty encoding benign intention cues than children without mental retardation (mean percentages = 65 % and 85 % respectively), F (1, 104) = 23.93, p [is less than] .001. In the analysis of the social-cognitive process of generation of strategies, the results indicated that children with mental retardation generated more aggressive strategies and appeal to authority strategies, and fewer assertive, accommodating, and avoidant strategies than children without mental retardation. Children with and without mental retardation were able to generate different strategies based on whether they had interpreted social situations as “mean” or “not mean.” An appeal to authority and avoidance were strategies used when the social situation was interpreted as “mean” and accommodation strategies were employed when the social situations were interpreted to have “not mean” intentions.

Guralnick and Paul-Brown (1984), evaluated the communicative adjustments of nonhandicapped preschool children addressing developmentally delayed companions for their effectiveness and appropriateness through analysis of behavior-request episodes in which initial failure occurred. The subjects in this study were twenty children, eight without handicap and twelve with cognitive delay, enrolled in an integrated program. Each of the eight nonhandicapped

children were chosen as a “tutor” and paired randomly with students with mild, moderate and severe cognitive delay, labeled as “companions”. As a control, additional pairings where both children were without handicap were established. The same random assignment process was completed again for a second session. The dyads spent fifteen minutes in an instructional setting that focused on the operation of a toy.

The instructional sessions were videotaped through a one-way mirror and speech was later transcribed and analyzed for the following possible outcomes: complete and full compliance, modified compliance, and speaker completed request independently. A total of 158 behavior requests were identified. The findings showed that tutors used longer utterances to address more developmentally advanced students. Analysis of proportion of utterance revealed that speakers without handicap were highly adaptive. Their most frequently used strategies consisted of repeating the previous utterance, adding relevant information, providing demonstration or exemplification, and using physical guidance. This finding implies that children can adapt their language to the development of the listener.

The researchers increased objectivity of this study by hiring an independent rater who watched 25% if the video and was found to be in 78.8% agreement with the researchers- they were in 81% agreement on exact word and 89% agreement on behavior-request. Only episodes with complete agreement were kept for analysis.

In an experimental design study, Roeyers (1996), examined whether children with autism benefit from regular opportunities to interact with a normal developing peer of the same age and sex. Roeyers hypothesize that the peer-mediated intervention would result in children with autism increasing time spent in interaction, length of interruption interactions, ratio of responses offered, numbers of social initiations made, and a decrease in the time spent in "interfering" behaviors. The subjects were eighty-five children identified as having Pervasive Developmental Disorder (PDD) and forty-eight nonhandicapped children who participated as play partners. All children were between the ages of 5 and 13 years old. Students were chosen from a group of children attending a categorical program for children with PDD in 13 elementary schools in a Dutch speaking area in Belgium.

Subjects were randomly assigned to treatment and control conditions for a total of 15 sessions, 5 of these sessions were recorded for analysis. Subjects were put into dyads, and children in the treatment group played in a dyad with a nonhandicapped peer. Subjects in the control group were only children with PDD. The researchers formulated specific criteria: initiation, response, noninteraction and distance. The videotapes were analyzed in 15-second intervals by five observers who were not familiar with the purpose of the study.

Pre-treatment observation of behavior showed little difference between the control and intervention group. Post-treatment behaviors were evidently different. The amount of time spent in presocial (recognizing self from non-self) behaviors increased significantly. The presocial behaviors were mainly categorized by time

spent observing behaviors of other children. Target children of the treatment group spent almost 90% of time in post treatment observation in pre or social behavior. The control group increased their interactive behavior by 10 percent.

This static-group design presents a possible weakness of selection. Differences between individuals at the start of the study could pose alternative explanations for the differences observed. Also, the time spent in these playgroups could represent a natural maturation over time, which could serve as an alternative explanation for changes during the experiment. The number of initiations in the treatment group increased significantly, but remained relatively rare.

Guralnick and Paul-Brown (1977) completed a correlational study that examined the nature of the verbal interactions that exist among handicapped and nonhandicapped preschool children by studying eight students without handicap and twelve students with handicaps between the ages of four and six. This study examined if certain parameters of linguistic development vary when nonhandicapped children talk to children with mild, moderate or severe handicaps. All twenty children attended an integrated preschool. None of the children in this study were physically handicapped. Four of the non-handicapped students were chosen as the most linguistically developed by their preschool teachers and were selected as “tutors.” The remaining four students without handicaps served as one group of “companion” children. IQs were determined using the children’s mean length of utterance (MLUs) and the American Association on Mental Deficiency on classification. Children were placed into

groups that represented one nonhandicapped tutor, one companion, and two students with handicaps.

The researchers familiarized each tutor-companion pair in two fifteen-minute sessions. Researchers recorded data of verbal interaction during the third session. The researches gave tutors drawings and asked them to describe the drawing to his/her companion child. Each session was audio recorded and a researcher transcribed the contextual setting. Recordings were transcribed according to Schiefelbusch's criteria that determined a reliability of 81%. The linguistic parameters represented a wide variety of language categories designed to reflect verbal productivity, diversity of speech, and grammatical complexity.

Analysis of data for each of the four tutor pairs was accomplished using Friedman analysis of variance by ranks and revealed nine significant differences ($p < .05$); most prominent were differences in speech productivity. Nonhandicapped tutors spoke considerably more to children who were more advanced. This pattern also emerged for MLU and number of complex constructions. As the developmental level of the companion increased, the tutor used more and a greater number of different nouns, asked more questions, and used more personal pronouns, noun modifiers, and indefinite pronouns. Nonhandicapped tutors had a greater tendency to use not only more but a greater variety of nouns, verbs, adjectives, and adverbs when addressing higher level children.

A second correlation study examined the speech of the same four tutor children from the first experiment in a free-time play session. Speech samples

were separately analyzed. The data was analyzed using Friedman analysis of variance. The analysis found that as the developmental level of the listener child decreased, the nonhandicapped speaker used fewer words, produced shorter MLUs and tended to repeat utterances more frequently.

Rejection and Conflict

The following studies report findings that suggest that inclusion practices can result in rejection or conflict. Litvack, Ritchie and Shore (2011) studied high- and average-achieving fifth- and sixth-grade students' perceptions of inclusion classrooms and found that these students perceived students with disabilities as lazy, incompetent, or disruptive and that they learned less as a consequence. Flem, Frostad and Pijl (2008) studied the level of peer acceptance and group participation of students with special needs in Norway and found that students with special needs are less popular, have fewer friendships, and participate less often in groups. Estell, Farmer, Jones, Pearl, Van Acker, and Rodkin's (2011) long-term study of the effects of inclusion on the social functioning of students with learning disabilities from third to sixth grade in a major Midwestern city found that although students with learning disabilities tend to be a part of the classroom social groups, they remain consistently lower in social status across later childhood compared to typically achieving peers. Evans, Frederickson, Simmons, and Soulsby (2007) assessed the social and affective outcomes of students in inclusion classrooms and found that students with special educational needs were less accepted and that these students were more often identified as victims of bullying.

Litvack, Ritchie and Shore (2011) studied high- and average-achieving fifth- or sixth-grade students' perceptions of inclusion classrooms. The study was conducted in two parts. In the first part of the study the subjects were from fourteen inclusion classrooms in four Montreal schools. The subjects were 234 fourth-, fifth- and sixth-grade students, and there was at least one special needs student in each class. A total of twenty-six of the students have a disability or difficulty and receive support services. The term "giftedness" in this study was defined as students having high achievement. The researchers asked each teacher to choose three of her top performing students. The second part of the study involved a subsample of 30 high-achieving students and 30 average-achieving students chosen from the original study.

This study employed both quantitative and qualitative methodologies to gather data. The first two research questions, "do attitudes toward students with disabilities vary among high-achieving students?" and, "do males and females differ in how they perceive students with disabilities?" were answered by quantitative measures. The final two questions, "what are the average- and high-achieving students' perceptions of the impact of inclusion classrooms?" and, "do perceptions differ between these two groups?" were answered by qualitative measures.

This article involved both a quantitative and qualitative study on the research questions above. For the first study the researchers distributed Teacher Information Questionnaires to determine the types of disabilities in the classroom and gifted students in the class. The Attitudes Toward Disabled Persons scale-

form was used to determine the perception of students with disabilities. Supplemental Enrichment and Acceleration History Interviews were given to high-achieving students.

The second study involved a semi-structured participant interview to determine students' social perceptions of the inclusion classroom. The subjects were asked open-ended questions that probed at their self-reported experiences. High-achieving students completed a post-interview, after the standard interview, in which they described any support services they had received for acceleration or enrichment programs. An inductive analysis was used to find overarching themes of the interviews. An outside researcher was used to interpret the data to minimize bias.

In the first study students with disabilities had a more negative attitude toward people with disabilities than they average or high-achieving peers. There was no meaningful difference between average and high-achieving peers. The difference between gender attitudes was slight, females having a slightly more positive attitude toward students with disabilities but this was considered to be more related to the percentage of male students who had disabilities.

In the second study only sixteen percent of students were aware that they had been in classrooms with students with disabilities, which lead the researchers to believe that children with disabilities are not seen as having a legitimate reason to have difficulties. These students perceived students with disabilities as lazy, incompetent or disruptive. Only 7% of high-achieving students reported having a friendship or helper relationship with students with disabilities,

but 20.8% of average-achieving students reported friendship or helper relationships with students with disabilities. Twenty of the students in the study reported that having a student with a disability in the classroom, “is interesting to see what a person with a disability is like.” High-achieving students reported more often that they learn less from having a special needs student in the classroom. One student specifically mentioned feeling bored when the teacher needs to repeat something seven times for others to understand. The conclusion of this was that it is more difficult in an inclusion classroom to keep all students engaged.

Flem et al (2008) studied the social position of students with learning disabilities in inclusion classrooms. They utilized different indexes for social positioning and considered the perspectives of students with special needs, general education students, and teachers. The sample consists of regular primary and lower secondary schools in and around Trondheim (Norway), where a majority of students with educational needs (SEN) participate in regular classrooms. The sample consisted of 15 schools, and focused on 14 fourth-grade classes and 13 seventh-grade classes. The sample of students (n=989) was fourth- and seventh-grade pupils aged 9-10 and 12-13 years. (491 students from fourth, 498 from seventh) The number of students with special educational needs were n=42 in fourth grade, n=37 in seventh grade, which is 8% of the sample.

Social position was described using sociometric techniques based on peer nomination. The sociometric data were analyzed using the UCINET and

NEGOPY 4.3 software. The second phase of analyses focused on developing an estimate for the degree of social inclusion of pupils with special needs. The third phase focused on three indexes of social inclusion based on peer acceptance, mutual friendships, and belonging to an in-class network, and then compared this data to the class teachers' assessment of their pupils' friendships and to pupils' self-reporting on their friendships. Analyses of the relationships between the indexes and teachers' assessments and self-reporting of friendships focused on the question of which of the indexes for social inclusion seemed most valid and to what extent social inclusion had been achieved.

The results showed that general education students and teachers had a more positive perception of social positioning than that of the students with special needs. The three indexes show that pupils with special needs are less popular, have fewer friendships, and participate less often as members of groups. The pupils with special needs in the fourth grade classroom had an average of 2.6 nominations in a list of five-top friends and 2.3 in seventh grade. The number of nominations received by students without special needs was significantly higher ($p<.00$). Fourth-graders scored 4.3 and seventh-graders 3.9. The same dataset shows the numbers of pupils receiving no nominations at all (as top 5 friend): 2.4 and 3.9% respectively of fourth and seventh grade pupils without special needs, and 14.3 and 24.3% from the special needs group. However, having only one nomination is not a clear indication of acceptance. About 8-12% of pupils without special needs and 33.3% of students with special needs are at risk of being excluded. The data also found that 5-7% of all students

without special needs are completely isolated from their peer groups. For pupils with special needs the number is 17 to 24%.

Estell et al. (2011) completed a long-term study that examined a sample of 1,361 students (678 girls, 683 boys, 55 with a learning disability) to assess peer social functioning over a span from third- to sixth-grade. The seven schools involved in this study were urban and suburban area schools in two districts near a major midwestern city in the United States. The study followed two cohorts, one year apart. 23-30 classrooms participated in each cohort. 55 of the students who participated in this study had learning disabilities (n=55), 34 were girls, and 21 were boys. This sample represents a disproportionate number of females receiving special services in comparison to the national average that states that males are four times as likely to receive special services than female students (Child Trends, 2010). All third graders at the seven elementary schools were asked to participate and those with permission slips were included in the study. Estell et al. (2011) gathered data two months into the semester, from spring of third grade through fall of sixth grade. Two doctoral students per classroom administered the tests. Their test measures included best-friend nominations, social cognitive mapping, and social preference. The researchers used a hierarchal linear model to estimate linear growth curves.

Estell et al. (2011) found that students with learning disabilities seemed to have similar academic achievement to their peers but were perceived as having a lower social standing. Students with learning disabilities had a lower status among peers in the classroom, scored lower than their typically achieving peers

in number of best-friend nominations, had marginally lower peer-nominated popularity, and were rated much lower in social preference. These findings indicate that although students with a learning disability tend to be part of the classroom social groups, they remain consistently lower in social status across later childhood compared to their typically achieving peers.

Due to a lack of comparison group it is difficult to determine the impact of inclusion in this study in comparison to a school without an inclusion program. The study shows strength in the population representing both urban and suburban schools as this strengthens the external validity.

Evans, Frederickson, Simmons, and Soulsby (2007) assessed the social and affective outcomes of students in inclusion classrooms in the United Kingdom and found that students with special educational needs were less accepted. A total of 397 children between the ages of eight and eleven years participated in the study. The children were members of fourteen different classes in eleven different mainstream schools. At least one pupil in each of the fourteen classrooms had a statement of special educational needs and had formerly attended a special school full-time but at the time of study were included in mainstream classrooms with support from the outreach program. All of these 'special pupils' had been educated with their mainstream class full-time for at least 18 months prior to the start of the study. For twelve of the pupils, the identified special need was autistic spectrum disorder; of the remaining pupils one had a language disorder and the other developmental delay. Across the 14 classes there were an additional 89 pupils who were on their schools' special

needs registers.

The researchers asked fifteen mainstream schools to participate in the study. Fourteen schools consented and consent forms were then sent to those schools' parents and pupils. The project was then described to the children by the researcher as an invitation for help completing questionnaires that would help the research project better understand how children get along with one another at school. An author of the study administered the questionnaires during a single whole-class session. Children were offered learning assistance to help support understanding of the questionnaire.

The questionnaire addressed the Social Inclusion Survey, which is a sociometric measure that assesses the willingness of students to interact with peers at school. The children were presented a list of peer names with four icons next to the name: a question mark (to indicate they did not know them well enough to play with them), a smiling face (to indicate a peer they enjoy playing and/or working with), a sad face (used to indicate classmates they would rather not work or play with), and a neutral face (to indicate a peer they do not mind working or playing with). These measures indicated rejection, social acceptance, and sociometric status groups. Students would earn the classification of 'popular' if they received a smiling face vote from half of their classmates, likewise a student who received more than half frowning faces would be classified as 'rejected'.

The students were also asked to associate the name of a classmate with the following descriptors: cooperates, disrupts, shy, seeks help, bully, bullying

victim, and leader. These seven ‘Guess Who’ items were analyzed to show the proportion of classroom peers nominating each child as fitting each of the descriptors. A twelve-point belongingness scale was also used as a measurement.

This study found significant differences between the special pupils and the other students in terms of acceptance and rejection for work, the pupils with special needs were considered less accepted and more rejected. However, in play, there was no difference in acceptance and rejection between special pupils and their typical peers. None of the formal special school pupils fell into the rejected category, although they were less likely to be considered popular. In contrast, the percentage of special education needs pupils falling into the popular category is about half that of the typical pupils on both work and play, while the percentage of special educational needs pupils falling into the rejected category is about four times that of the typical pupils on work and twice as high on play.

Stereotypes

Bohner, Gonzalez, Millar, Ordonez, Siebler, Sirplou, Tezanos-Pinto and Torres (2008) studied the effects of school inclusion programs on nondisabled students’ stereotypes and attitudes toward people with Down syndrome and found that male students from non-inclusion programs exhibited more prejudice, pity and were most patronizing toward people with Down syndrome.

Bohner et al. (2008) examined the effects of school inclusion programs on male and female nondisabled students’ attitudes toward people with Down syndrome in a Chilean school. The subjects were 120 Chilean students (80

female, 40 male) grades 6 through 8 who had volunteered to participate. The age of the subjects ranged from 11 to 15 years (M = 12.9 years). None of the participants had Down syndrome or any other disability. The selection of subjects for this study threatens the external validity of the study because twice as many females and males participated in the study, giving a more accurate representation of female perceptions.

Half of the subjects attended two Chilean schools with inclusion programs. The other half of participants attended schools without inclusion programs. All four schools encourage cooperation, equality, and respect for differences, but only two of the schools have inclusion programs. The schools with inclusion programs had developed policies for integrating students with special needs into their school.

The researchers asked participants to complete a questionnaire with several sections. The items assessed in the questionnaire measured stereotypes and attitudes regarding stereotypes, prejudice, attitudes, affect toward, and intergroup trust and anxiety.

The researchers stated in the findings that, in regard to stereotypes about people with Down syndrome, there is no effect of school system on any of the stereotype measures. However, overall female students perceived people with Down syndrome to be less hostile and more diligent. Participants showed relatively low levels of prejudice against people with Down syndrome. However, male students in schools without inclusion program were more prejudiced than any other group. Male students from schools without inclusion exhibited greater

patronizing toward people with Down syndrome than did students from any other group. Students at non-inclusive schools reported greater pity toward people with Down syndrome. In general, intergroup trust results were high for all participants. Intergroup anxiety was quite low overall, but male students from non-inclusion programs had the highest rate. These findings suggest inclusion programs help lessen pity toward people with Down syndrome. The findings also suggest that male students exhibit greater prejudice toward people with Down syndrome.

Inclusion Practices Effect on Academic Achievement

The first section of this chapter, analyzed the effects of inclusion on self-concept development in students. The second section examined the implications of inclusion on the classroom community. This third and final section analyze studies that examined the effects of inclusion on learning outcomes, access to curriculum, as well as classroom environmental factors that impact the success of inclusion. Ashman and Gillies' (2000) study of the effects of cooperative learning on students with learning difficulties in lower elementary classrooms in Brisbane, Australia found that students who participated in group work were more successful in applying acquired skills to new situations. Noble (2004) studied the effects of integrating Bloom's Taxonomy and Howard Gardner's theory of multiple intelligences as a planning tool for differentiation and found that the integration helped differentiate the curriculum to include a diversity of student strengths. Slavin and Stevens (1995) studied the long-term effects of a comprehensive cooperative learning approach on second- through sixth grade students' reading comprehension and found that there was a

significant positive effect on reading vocabulary. Fisher and Frey (2001) studied how three students with significant cognitive disabilities accessed the core curriculum in general education classes at different grade levels and found that peers of average development helped to provide ideas for curriculum accommodations and modifications to include students with significant cognitive disability during group work. Bashinski, Bovaird, Soukup and Whemeyer (2007) studied the degree that students with intellectual and developmental disabilities accessed the general education curriculum and found that both high- and medium-inclusion group members had more access to the general curriculum than low inclusion group members. Cassidy, Hegde, and Hastenes (2008) compared the quality of learning environments for inclusion and non-inclusion preschool classrooms in North Carolina and found that inclusion classrooms were higher in global quality. Dugan, Kamps, Leonard, Watkins, Rheinberger, and Stackhaus (1995) completed a study to address the facilitation of integrating students with disabilities academically and socially and found that students were more academically engaged and reported higher levels of academic achievement when placed in cooperative learning groups.

In an examination of how children with learning difficulties interact in cooperative learning groups, Gillies et al. (2000) assessed interaction along with behavioral and learning outcomes. The study was completed in Australia, where the identification and funding of support service is not federally mandated. Children with learning difficulties are identified based on judgment and perception of need by the school. Twenty-five grade three classrooms in eleven schools in

Brisbane, Australia were included in this study. The schools were considered of the same socioeconomic and demographic profile. Of the one hundred and fifty-two participants, working in four-member, gender-balanced groups, twenty-two were identified as having learning difficulties.

The classrooms involved in this study were divided into structured and unstructured groups. The teachers in twenty-five classrooms established small-group activities for three one-hour sessions per week. The students in the structured groups were given two one-hour training sessions on cooperative group social skills in which they developed guidelines for discussions and group work. The unstructured group were not given social cooperation training but were still asked to develop guidelines for group work. The groups completed a unit in the social studies sourcebooks using Bloom's Taxonomy to problem solve. The Otis-Lennon School Ability Test was used to determine the ability of participants, group observation was used to determine behavioral interaction, and learning outcome was determined based upon a comprehension questionnaire based on Bloom's Taxonomy and a reading test.

The small groups for the study were determined by giving the students an Otis-Lennon School Ability Test, and then arranging groups with one high-achieving (top quartile), two medium range (second and third quartile), and one low-achieving student (bottom quartile). Classes were then divided into structured or unstructured settings, structured groups would receive training for cooperation and unstructured would not. Twenty-two students with learning difficulties were represented in the study; twelve were placed in the structured

groups, ten in the unstructured groups.

The results showed no significant difference existed in cooperative behavior between structured and non-structured groups, but there was a significant difference in the amount of non-task behavior. Students with learning difficulties in the unstructured group showed significantly less group work involvement. Students in structured groups were more likely to collaborate to problem-solve. Children in the structured groups were more successful in applying these skills to new situations in the post-test; however their reading skills were not much improved. These results suggest that when time is taken to establish structure in a cooperative learning structure then students will be more successful in collaborating and problem solving.

Noble (2004) studied the effects of integrating Bloom's Taxonomy and Howard Gardner's theory of multiple intelligences as a planning tool for differentiation. Both qualitative and quantitative methods were employed to conduct the study. The two schools that participated in the study were similar in population size and school system but very different in ethnic, cultural and socioeconomic status. 75% of the students of one school in the study were English language learners, 59% of parents were in trade or unskilled professions and 30% parents unemployed. In the other school, 46% of the students were English language learners and the parents of students had predominantly professional occupations. 16 teachers from kindergarten to sixth grade used a multiple intelligence revised Bloom's Taxonomy (MI/RBT) planning matrix for curriculum differentiation and completed the same anonymous questionnaire.

Extensive triangulation of data was provided through the following methods. An anonymous open ended teacher questionnaire was completed by all teachers, whole staff focus group discussions were conducted each school term, interviews were given to teachers in pairs each school term, two open-ended principal questionnaires plus two interviews were conducted with the principal, and the researchers kept field diaries.

Teachers reported consistently that the typologies of MI theory and RBT helped them in different ways to cater to the individual learning capabilities of the students in their classes and thereby facilitated student success. 73% teachers agreed MI theory provided them tool for catering for different intellectual strengths or ways of learning. 91% teachers wrote comments that indicated that MI theory broadened their conceptualization of how students could be successful. Revised Bloom's Taxonomy was found to help differentiate curriculum, and planning tasks appropriate of thinking for different students.

In a comparison study, Slavin and Stevens (1995) studied the long-term effects of comprehensive cooperative learning approach on second- through sixth-grade students' reading comprehension in suburban, working-class Maryland. Thirty-one experimental classes in three schools were compared to thirty-two non-experimental classes in four schools; the total number of students was 1,299. 11% of students were identified as having a learning disability. The participants were 0-10% minorities and 6-13% considered "disadvantaged" by receiving free or reduced price lunch. This population represents a large number

of white students, and cannot be generalized to diverse populations, or populations in areas of poverty.

The teachers in the control group continued using traditional methods and curriculum materials (basal series from district's adoption list) allotting 60-90 minutes each day for reading instruction. Reading group time consisted of vocabulary instruction, story discussion and brief opportunity for oral reading turns. An additional 45 minutes each day was allotted for teaching Language Arts, with instruction consisting mostly of whole class instruction on language mechanics.

The teachers in the experimental group used the Cooperative Integrative Reading and Composition program designed by Stevens, Slavin and Farnish in 1987. This program consisted of story-related activities, direct instruction in comprehension strategies, and integrated writing and language arts. Teachers also used writing-process approach in language arts in a combination of whole-class instruction and one-on-one conferences between student and teacher, In addition, 60 to 90 minutes each day was allotted to reading, depending on grade, as in the control group. The teachers were trained for two days on the CIRC program, one day of training on reading and one day of training on Language Arts. The teachers were monitored throughout the study to ensure proper implementation. The short interval of training threatens the internal validity of the study as the instrumentation may change over time.

The researchers measured the students' achievement through a pre- and post-test. The students' use of metacognition was inferred through measures of

reading comprehension, and the researchers acknowledged that inference might not warrant credible findings. A final measure analyzed was an Index of Reading Awareness that tested students' awareness of strategies.

The researchers acknowledged that it was difficult to disentangle the effects of schools or teachers on student outcomes relative to the experimental intervention. However, the posttest indicated significant positive effects of the experimental intervention on student's reading vocabulary $t(47)=2.11$, $p<.05$. This finding also applied to students with learning disabilities, whose data was analyzed separately. There were no significant effects on language mechanics, language expression, metacognition, or attitude for any participants.

Fisher and Frey (2001) used a grounded-theory qualitative approach to study how three students with significant cognitive disabilities accessed the core curriculum in general education classes at different grade levels. The researchers selected subjects by asking nine special education teachers with experience in inclusive education from nine urban schools (three high schools, three middle schools, and three elementary schools) in two states to nominate students with significant disabilities who received their special education services in general education classes. From the potential pool of 182 students, 3 students were selected: 1 from elementary school, 1 from middle school, and 1 from high school. Of these 3 students, 2 were female and 1 was male. Parent permission was obtained for each student. This selection process ensured that a cross-section of ages was represented. During the time of the observations, participant Lillian was in third- through fifth-grades in Florida, participant Marshawn was in

sixth- through eight-grades in California, and participant Heather was in tenth- through twelfth-grades in California. Each of these students had been identified under federal definitions as having a significant cognitive disability (severe to profound mental retardation) and was a full-time member of general education classes.

The sources of data came from both observation and interviews. Classroom observations were completed at random in a variety of subject areas. Data collection averaged just over two days per month, and a total of sixty visits were made. Classroom observation times were not scheduled and typically lasted 20-55 minutes per classroom. The researchers gathered data through observations, quotes, and notes to follow up during interviews. The format also included space for coding the data during successive reviews. Although they were unable to record all events in the classroom, the research aimed their recording of information at interactions with the focus student. This translated to more than 450 pages during the 1996-1999 school years.

Interviews were added during the third year of the study. The 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. For each focus student, individual interviews were conducted with the students' parents, two general education teachers, a special education teacher, and three peers. The interview began by asking about the child's typical day of 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 regarding the student's IEP goals and accommodations. The interviews were transcribed, translating to 380 pages of data.

Researchers independently analyzed the data for themes. Each researcher independently categorized the data into broad areas and highlighted quotes and examples that supported each category. The researchers found themes that 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 findings clustered into four broad themes: individualized, content-specific accommodations and modifications, collaboration among the teaching team, the involvement of peers, and a present disconnect between the IEP process and classroom implementation of curriculum and instruction. General strategies were used to create accommodations that often did not apply across lessons. The collaboration between the teaching team allowed for dynamic teaching practices. The observation data found that students actively interacted and involved their peers with significant cognitive disabilities. Finally, it was found that 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 used as a means of obtaining ensure supports and services.

The researchers were clear in acknowledging their concerns about the objectivity of qualitative data. To address their concern the findings were shares

with three teachers who had experience in inclusive education, increasing the confirmability and credibility of the study.

Bashinski et al (2007) quantitatively assessed the degree that students with intellectual and developmental disabilities accessed the general curriculum. The participants in the study were nineteen elementary students with mental retardation (n=7) or autism (n=2) from three suburban schools in the Midwest. The students ranged in age between ages seven and twelve (m= 10.63 years, SD=1.34) between second- and sixth-grade, twelve were male and seven were female. Students considered high inclusion spent 75-100% of their time in the general education classes (n=6, age 10.83), students considered medium inclusion spent 51%-74% of their time in the general education classroom (n=7, age 10.71), and students considered low inclusion spent 0-50% of their time in the general education classroom (n=6, age 10.33).

The researchers used CISSAR, a direct observational system with reliability of 85%, which focused on the individual student as an observer's target through momentary time sampling. Three conceptual settings were considered: classroom ecology, teacher behavior, and student behavior. Data was collected over a three-month period during the spring semester when the researcher met with the teacher to assess what content standards were to be addressed in class, and then the student was observed for twenty minutes.

The findings received an interrater reliability Cohen's Kappa of .94, ranging from .85-.99. The findings stated that peers without special educational needs were working at grade level expectation 67% of the time, and the

participants were working at grade level expectation 61% of the time. Another finding was that both high inclusion and medium inclusion group members had more access to general curriculum than low inclusion group members, but high- and medium-inclusion participants had equal access to the curriculum. Students in entire-group or divided-group physical arrangement had more access to the general education curriculum than study participants in an individual physical arrangement.

Cassidy, Hegde, and Hastenes (2008) compared the quality of learning environments for inclusion and non-inclusion preschool classrooms in North Carolina. 1,313 preschool classrooms in programs across the state of North Carolina participated in the study. Assessors completed ECERS-R with 1-7 scale rating space, furnishings, personal care routines, language reasoning, activities, interaction, program structure, and parents and staff. Assessors observed the classrooms for 3-4 hours, and an 85% interobserver reliability was needed in order to complete the assessment.

The findings stated that 459 classrooms (35%) contained at least one child with an identified disability, 854 (65%) contained only children who were typically developing. The totally number of students with disabilities was 1,183; the average severity of the disability on a three-point scale was 1.67 (SD= .057). Results indicated that inclusive preschool classrooms (n=459) were higher in global quality than noninclusive classrooms (n=854), F (1,311)=42.4,p<. 0001. Inclusive classrooms scored significantly higher than noninclusive classrooms in the activities/materials factor, F (1,311)=18.9,p<. 0001, and language/interaction

factor F (1, 1311)=49.5, p<. 0001. Inclusive classrooms had significantly higher scores on four of the ECERS-R subscales (language-reasoning, activities, interaction and program structure) when they used a stringent p-value to control multiple comparisons. Teachers for inclusive classrooms had significantly more education than teachers from noninclusive classrooms. The statistics were rerun to account for higher education level of inclusion teachers but inclusive classrooms were still significantly higher in quality than non-inclusive classrooms.

Dugan et al. (1995) completed a study to address the facilitation of integrating students with disabilities academically and socially. The subjects (n=18) consisted of two students with autism and their sixteen regular classroom peers from a fourth-grade classroom in an urban elementary school. One target student was ten-years-old, and was considered by her teachers to be moderately functioning. She completed work at a second- to third-grade level; however, she showed weakness in work related to comprehension or abstraction. The second subject was nine-years-old, considered high functioning by his teachers, and completed work at a second- to third-grade level. The forth-grade peers were six male and ten female students. The study took place in their regular classroom and the observers were present throughout to ensure program fidelity in data collection.

The researchers used a reverse design for the study. Teachers used 40-minute lecture periods for the social studies material four times per week during the original two-week baseline of the study. After this baseline, teachers taught only through cooperative learning. The researchers structured these cooperative

learning classes beginning with ten minutes of lecture, followed by implementation in cooperative learning groups. In addition, a second component of the program was added in which students learned appropriate social skills for team task behaviors. Data was collected through weekly pre- and post-tests in the social studies curriculum and through five-minute probes of student engagement and interaction. The five-minute probe consisted of the Code for Instructional Structure (CISSAR) observation system during which behavior was monitored and recorded.

The findings showed academic gains for both target and peer students. Engagement levels rose significantly: from 2-25% at baseline, to 72-90% during cooperative learning groups. However, student attention (i.e. listening, watching but not actively responding) decreased during the intervention. In addition, nonacademic behaviors (i.e. locating materials and inappropriate talking) decreased during cooperative learning groups. Given the team-oriented activities, students also spent far more time in the cooperative learning groups interacting with peers.

Summary

Chapter two provided a review of professional literature representing various schools of thoughts on the premise of the social growth and academic achievement effects of the inclusion of peers with disabilities in the general education classroom. It began with four studies that examined inclusive practices effects on a student's development of self-concept. Two of these studies found that students with disabilities in the general education classroom reported lower

levels of self-esteem, lower self-perception of scholastic competence (Daniel et al., 1997; Bear et al., 1991). Alternatively, two of these studies found that students with alternative learning needs reported a higher level of self-confidence and esteem when they learned in purposefully cooperative learning conditions (Cesar et al., 2006; Johnson et al., 1981). The next two studies looked at students' intent to include students with disabilities in the general education classroom and found that inclusion had a positive impact on the intent to include and greater social acceptance of student with disabilities (Campbell, 2010; Favazza et al., 2000). The following four studies examined communication across students of varying ability and found that when students were integrated with students of varying ability there was more cross-group interaction (Johnson et al., 1981; Johnson et al., 1984; Johnson et al., 1982a; Johnson et al., 1982b).

Three studies examined social interaction between students and found that students with disabilities, lower social status, and lower social-ability were at times manipulated or outcast in the general education classroom (Berry, 2000; Antia et al., 2005; Algozzine, 2000). Three additional studies examined social interaction and found that typically developing peers as young as four-years-old were able to accommodate their speech to the listener's developmental level (Guralnick et al., 1984; Roeyers, 1996; Guralnick et al., 1977). Four studies reported findings of rejection and conflict occurring in inclusive classrooms and found that students who received special services were perceived negatively by their peers and remained less accepted across their K-12 education (Litvack et al., 2011; Flem et al., 2008; Estell et al., 2011; Evans et al., 2007). One study

examined the stereotypes that students held regarding people with Down syndrome and found that students from inclusive school programs had a more positive perception of people with Down syndrome (Bohner et al., 2008).

The final seven studies looked at how students who received special educational services in the general classroom accessed the curriculum and what strategies benefitted students. Two studies in this section found the highest level of academic achievement and greatest access to the general curriculum reported in students who received their instruction in the general classroom (Fisher et al., 2001; Bashinski, 2007). One study found that using Bloom's Taxonomy and Howard Gardner's Multiple Intelligences helped differentiate the curriculum to accommodate for students with special learning needs (Noble, 2004). Three studies in this section showed that cooperative-learning environments were more beneficial for helping students with special needs access the core curriculum (Ashman et al., 2000; Slavin et al, 1995; Dugan et al., 1995).

Each study was summarized and critically analyzed based upon the findings. The research was reviewed to examine the outcomes of inclusion programs from a variety of settings. Chapter three will integrate the findings of this review with the rationale and historical background presented in chapter one, and then present possible implications of this research on the elementary classroom, as well as provide recommendations for future research.

CHAPTER THREE: CONCLUSION

Introduction

Chapter one discussed the relevance of this research, the controversies and conflict of inclusion, and also gave overview of the history and societal context of inclusion. Chapter two provided an integrative review of professional literature representing various schools of thought on the premise of the social and academic effects of the inclusion of peers with disabilities in the classroom. The research in this chapter was organized into three main sections: inclusion's effects on students' self-concepts, its effects on the classroom community, and finally inclusion's effects on learning and teaching. Each study was summarized and critically analyzed based upon the findings. The research was reviewed to examine the outcomes of inclusion programs from a variety of settings. Chapter three will connect the review to this original rationale, determine effective classroom practices based on the findings, and recommend areas for further research.

Summary of Findings

In an era when the classroom is becoming progressively more inclusive of students with varying learning needs, it is important that educators evaluate the effects of inclusion practices on the emotional growth and academic achievement of their students. The findings of this research examined different inclusion practices and their effects on students. This section will summarize the findings of the studies reviewed. First it will examine how the inclusion of students with

learning disabilities affects the self-concept of all students. Second, it will summarize the findings of how different inclusion practices impact the classroom community, interpersonal attraction of students, and the level and quality of social interaction between students. Lastly, the findings of studies that examined different inclusion strategies impacts on learning and teaching practices will be summarized.

Receiving instruction in the general education classroom was determined to have a negative impact on how students with disabilities perceived themselves. Students with learning difficulties receiving instruction in the general classroom reported lower self-esteem and higher behavior problems (Bear et al., 1991; Daniel et al., 1997). In particular, female students with disabilities had the poorest self-perception of their physical appearance (Bear et al., 1991). The findings of these two studies show that inclusion had a negative impact on the emotional growth of students receiving special services in the general education classroom. Alternatively, two of the studies regarding self-concept found that students with alternative learning needs reported a higher level of self-confidence and esteem when they learned in purposefully cooperative learning conditions (Cesar et al., 2006; Johnson et al., 1981).

The inclusion of peers with learning challenges did have a positive impact on the acceptance of people with disabilities and of interaction between groups (Campbell, 2010; Favazza et al., 2000; Johnson et al., 1981; Johnson et al., 1984; Johnson et al., 1982a, Johnson et al., 1982b) In addition, other studies reported findings that students who did not require special services benefitted

from the inclusion of peers with challenges, and as a result they had a more positive perception of people with disabilities than did students who were in classrooms that did not have inclusive practices (Favazza et al., 2000; Bohner et al., 2008). However, at times students tended to have negative perceptions of their peers with learning challenges, and some students who scored as high-achieving reported boredom when being placed with lower-achieving students (Litvack et al., 2011; Flem et al., 2008).

Three studies found that typically developing peers as young as four-years-old were able to accommodate their speech to the listener's developmental level (Guralnick et al., 1984; Roeyers, 1996; Guralnick et al., 1977).

The social status of students can be used to manipulate a community ethos, and be used to manipulate lower status students (Berry, 2006). Since students with learning challenges tend to have a lower social status (Flem et al., 2008; Litvack et al., 2011; Evans et al., 2007; Estell et al., 2011) they at a higher risk of being manipulated in the classroom.

Other findings suggested that students who received special services were perceived negatively by their peers and remained less accepted across their K-12 education (Litvack et al., 2011; Flem et al., 2008; Estell et al., 2011; Evans et al., 2007). One study examined the stereotypes that students held regarding people with Down syndrome and found that students who were in inclusive school programs had a more positive perception of people with Down syndrome (Bohner et al., 2008).

The final seven studies looked at how students who received special

educational services in the general classroom accessed the curriculum and what strategies benefitted students. Overall, educating students who receive special educational services in the general education classroom yielded positive results for academic achievement (Daniel et al., 1997; Johnson et al; 1981). Two other studies found the highest level of academic achievement and greatest access to the general curriculum reported in students who received their instruction in the general classroom (Fisher et al., 2001; Bashinski, 2007). One study found that using Bloom's Taxonomy and Howard Gardner's Multiple Intelligences helped differentiate the curriculum to accommodate for students with special learning needs (Noble, 2004). Three studies in this section showed that cooperative-learning environments were more beneficial for helping students with special needs access the core curriculum (Ashman et al., 2000; Slavin et al, 1995; Dugan et al., 1995). A cooperative learning environment yielded the most positive emotional and academic growth for a classroom with inclusion practices (Ashman et al., 2000; Dugan et al., 1995; Slavin et al, 1995).

Classroom Implications

The findings suggest that including students with learning difficulties in the general education classroom benefits the student's academic achievement and social growth. Interestingly, however, the students receiving special services tend to report a lower value of self-worth, have lower self-confidence, perceive themselves negatively and are overall excluded from close friendships with their classmates. Students in inclusive classrooms communicate with people on a spectrum of achievement-level and alternate-abilities. Studies also suggest that

students as young as four-years-old are capable of altering their style of communication to adjust to the developmental level of the listener. Some of the studies in this review reported that a purposefully cooperative-learning environment had a positive impact on the student's self-worth.

In order for inclusion education to be successful it is necessary that teachers create a learning environment that promotes the development of collaborative social skills and a strong foundation of equity and respect. This will ensure that both students with and without learning challenges gain all there is to learn from inclusive educational practices. Inclusion provides an opportunity for students without disabilities to understand the culture of disability and also to confront their own fears and bias. Louis Heshusius, professor emeritus at York University, was once asked to counsel undergraduate students who were dismayed with the fear of one day becoming disabled after watching a documentary. She refused to counsel them by providing empathy or sympathy, but rather helped them acknowledge these fears and their implications for self-perception and perceptions of those with disabilities. She argued that most people spend life seeking relation to groups with many commonalities to themselves, and that people distance themselves from people with disabilities for fear that it will construct a less desirable sense of self (Heshusius, 2004).

It is not enough to simply integrate students with learning disabilities with students of general ability. If the classroom is not a safe place for all students then an academic achievement gap will exist. "It is well documented that isolation and rejection by peers takes away a sense of belonging at school, hinders

access to social experiences and is devastating for motivation and school performance" (Flem, A., Frostad, P., & Pijl, S., 2008, p.388). Additionally, some argue that even if students with learning disabilities attain higher academic achievement when studying with peers of general ability, a classroom cannot be truly considered inclusive until there is a sense of belonging (Flem et al., 2008).

Teachers can help evolve their classrooms into more inclusive environments by intentionally creating learning situations where students rely on one another's strengths and intricacies to complete a task. In this way, students will realize their competence and their self-worth will be positively impacted (Ashman et al., 2000).

Suggestions for Further Research

Further research is necessary that examines effective practices for differentiating the curriculum to meet the needs of a diverse body of students. The research analyzed for this review studied the social interaction between students without much look at the different strategies that currently exist to help differentiate the curriculum. Little research is available that shows how differentiation strategies effect the academic achievement of students in inclusive classrooms.

In addition, the methodology for data collection for social development leaves much to be desired. Many of the data collection seemed subjective and focused on friendship nominations and verbal affirmations of friendships and popularity. Research that focuses on the greater picture of how students perceive students of different backgrounds would be more beneficial.

More research into the unbalanced representation of gender and ethnically diverse groups in special education would also benefit the field.

Conclusion

Chapter one discussed the relevance of the research, the controversies and conflict of inclusion, and also gave overview of the history and societal context of inclusion.

Chapter two provided an integrative review of professional literature representing various schools of thoughts on the premise of the social and academic effects of the inclusion of peers with alternate learning needs in the classroom. The research in this chapter was organized into three main sections: inclusion's effects on students' self-concepts, its effects on the classroom community, and finally inclusion's effects on learning and teaching. Each study was summarized and critically analyzed based upon the findings. The research was reviewed to examine the outcomes of inclusion programs from a variety of settings.

Chapter three connected the review to this original rationale, determined effective classroom practices based on the findings, and recommended areas for further research.

As general education classrooms continue to increase the population of students who receive educational accommodations, it is imperative that teachers create an environment that fosters equity and democracy. Through intentional cooperative learning opportunities, teachers can help raise students' awareness of acceptance and interactions with people different from themselves.

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