Achievement, Locus Of Control, Self-Concept, Social Problem Solving Training And The Acquisition Of Prosocial Skills In Children

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ACHIEVEMENT, LOCUS OF CONTROL, SELF-CONCEPT, SOCIAL PROBLEM SOLVING TRAINING AND THE ACQUISITION OF PROSOCIAL SKILLS IN CHILDREN.

By

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Dedication

To Barry, Gina, and Nic, know that your encouragement, love, and support are something that I treasure and which have helped to make this a truly wonderful experience.
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CHAPTER I

Introduction

Prior to the 1970's educational practices for pupils with disabilities were significantly different than the practices which have evolved since that time. Before the 1970's, children with disabilities were generally excluded from public schools. Services, when provided, were limited, usually offered in segregated and "second class" settings, (Kerzner-Lipsky & Gartner, 1989, p.3). It was not until 1975 that the government realized a responsibility for public education to educate all pupils and passed P.L. 94-142, The Education for All Handicapped Children Act (EHCA). In 1985 and 1997 this bill was amended and is now known as the Individuals with Disabilities Education Act (IDEA). Two important components of this bill are that pupils with disabilities have access to a free and appropriate education (FAPE), and that this education must take place in the least restrictive environment. It is this least restrictive environment clause which has come under examination in recent years and has led to two important movements; the Regular Education Initiative (REI), a government sponsored reform movement, and Inclusion, a privately organized advocacy movement. The goal of both of these movements is the inclusion of pupils with disabilities in regular education programs. The REI focuses
on including high incident pupils, or students with mild to moderate disabilities into regular education classes; the Inclusion movement focuses on integrating students with severe to profound disabilities into the regular education program. While these two movements differ in the type of population for whom they advocate as well as educational philosophy, both movements believe that one of the major benefits of including pupils with disabilities into regular education is an increase in social competence for the student with disabilities.

As Gresham (1981) explains, there has been an existing assumption on the part of educational officials that integrating students with disabilities in with their non disabled peers would in fact improve the social abilities of the disabled students. However, Gresham (1981) sites research conducted from 1970 throughout 1978 that demonstrates "...the handicapped children do not vicariously acquire social skills via observation of nonhandicapped children unless they are instructed, trained, or reinforced for doing so" (p.139). There is further evidence (Gresham, 1981) which indicates that teaching social skills in isolated settings does not produce long lasting effects, and that there is a need to address the development of prosocial skills for children with disabilities in non isolated settings.
A major goal of education in our country is to prepare all children to function appropriately in society. While the teaching of social skills is considered to be a primary goal of elementary education, little research exists which investigates techniques used by regular education teachers to develop these skills (Solomon, Watson, Delucchi, Schaps, & Battistich, 1988). With reports of increased school violence and youth substance abuse, affective and social development has also begun to be an area of focus for students without disabilities (Pietrzak, Petersen, & Speaker, 1998). However, social skills training for the most part has been provided primarily for pupils with special needs and this training has been conducted either within a special education setting or in small groups with someone other than the regular education teacher providing this training (Coie & Keoopp1, 1990). As a result of both the Inclusion movement and the National Educational Goals for the Year 2000, there has been growth in the number of curricula developed to address the area of social skills development. Further, in response to the National Educational Goals for the Year 2000, there has been an abundance of programs developed to help curb rising violence and substance abuse in schools. However, these programs are being designed primarily for at risk youth, or as preventative measures aimed at the general school
population. Elias, Zinns, Weissberg, Frey, Greenberg, Haynes, Hessler, Schwab-Stone, and Shriver (1997) indicate that many of these programs are frequently not coordinated with other similar programs offered in schools, are not comprehensive, and do not always address what they believe to be the underlying problem with substance abuse or violence, which is inappropriate social and emotional development.

Focusing on developing problem solving skills is one type of program that is gaining acceptance as a way of addressing the social and emotional needs for both students with and without disabilities. Elias and Clabby (1997) have chosen to address the development of prosocial behaviors through teaching students the steps involved in solving problems which occur throughout a person’s day. Further, they believe that by addressing those prerequisite skills to problem solving such as listening, self control, and conversational strategies, that a student will develop prosocial behaviors. Research (Elias, Gara, Schuyler, Branden-Muller, & Sayette, 1991) indicates that an earlier version of the Social Decision Making and Problem Solving program (SDM-PS), has been effective in reducing self destructive behaviors and depression in Middle School and High School aged boys. This program also produced significant results in improving social competency for
middle school aged girls, but only approached significance for boys.

Other researchers (Jackson, 1987; Bandura, 1986) indicate a need for a multifaceted approach to developing prosocial behaviors, particularly for adolescents. Areas in need of attention, according to Jackson, are an understanding of the nature of the disability, the pupil's affective-defensive pattern, adaptive or coping strategies of the pupil, and the communication abilities of the pupils. Bandura (1986) emphasizes the complexity of the development of social competency and it is his view that "... human functioning is the result of a triadic reciprocity in which behavior, cognitive and other personal factors, and environmental events all operate as interacting determinants of each other" (p.18). Elias and Clabby's SDM-PS program is one which has attempted to take into account social, emotional, and cognitive factors in an attempt to create students who not only display prosocial behaviors, but exhibit the ability to solve problems and conflicts in proactive ways, and generalize these learned skills into real life settings.

Statement of the Problem

Advocates for Inclusion point to the failures of past practices and are pushing for social skills development to be addressed within the regular education setting (Brown,
Schwarz, Udvari-Solner, Frattura-Kampschroer, Johnson, Jorgensen, Duxstad, & Gruenewald, 1990; Falvey & Rosenberg, 1995; Hamre-Nietupski, Hendrickson, Nietupski, & Sasso, 1993; Carey & Stoner, 1994; Forest, 1989). Jackson and Bandura indicate that the development of prosocial behaviors is a complicated process and is dependent upon many variables both internal and external. Further adding to this complex problem is the fact that not all pupils with a disability exhibit social incompetence. However, "...students with learning disabilities are disproportionately represented in the low accepted and socially rejected categories" (Tur-Kaspa & Bryan, 1995, p.4). Efforts to address social skills training within the regular education setting therefore, must be comprehensive, particularly for those students with disabilities. Further, the Goals for the Year 2000 have encouraged schools to address the development of prosocial behaviors in all students, not only those with disabilities.

Elias and Clabby (1989) have designed a program that they found effective in improving students' abilities to solve problems. However, research (Elias, Gara, Schuyler, Branden-Muller, & Sayette, 1991) indicates that this program is highly significant in improving social competency in girls, and only approached significance for boys. If it is necessary as Bandura and Jackson indicate to
view the development of social skills as a complex process, then the teaching of social skills must take this into consideration. Studies (Dudley-Marling, Snider, & Tarver, 1982; Tolor, Tolor, & Blumin, 1977; Walker & Debus, 1991; Vaughn, Elbaum, & Schumm, 1996; Grolnock & Ryan, 1982; Eisenberg & Mussen, 1989; and Goleman, 1995) have been conducted which investigate the impact of factors of intelligence, locus of control and self concept on academic learning, but little research has been done in this area with regards to the impact of these factors on the development of prosocial behaviors. Therefore, it is important to determine if these variables, which have been shown to correlate to academic achievement, may help to explain why a program such as SDM-PS can be highly successful with some students and only partially successful with others. The research should also investigate if students of differing academic status achieve at different levels of prosocial behaviors. It would be important to determine if, among students with disabilities, intelligence is related to the acquisition of prosocial behaviors. Taking these factors into consideration, this research will attempt to investigate the following questions.

Research Questions

1. Is there a significant gain in prosocial behaviors for
students who have participated in the Social Decision
Making-Problem Solving program?

2. Do higher achieving pupils develop significantly higher
levels of prosocial skills than their lower achieving and
disabled peers do?

3. Is there a significant relationship between a student’s
locus of control and his or her ability to attain higher
levels of social functioning?

4. Is there a significant relationship between a student’s
level of self concept and his or her ability to attain
higher levels of social functioning?

5. For students with disabilities, is there a significant
relationship between intelligence level and the attainment
of social skills?

**Definition of Terms**

Prosocial Behavior: “refers to voluntary actions that
are intended to help or benefit another individual or group
of individuals.” (Eisenberg & Mussen, 1989, p.3) These
behaviors may be taken for a variety of reasons and not
necessarily for altruistic purposes.

High Achieving student: a high achieving student, for
the purpose of this study, is that student who is
functioning within the upper one third of his or her grade
level as determined by the Composite score of the 1998
CTBS.
Low achieving student: a low achieving student, for the purpose of this study, is that student who is not classified as eligible for special education and related services according to N.J.A.C. 6A:14, but is functioning within the lower third of that student's particular grade level as measured by performance on the California Tests of Basic Skills (CTBS).

Locus of Control: Tarnowski and Nay (1989) define Locus of Control as "an individual's perception of environmental control. Externally oriented individuals perceive the occurrence of positive and negative events as independent of personal control. Internally oriented individuals perceive their actions as contingently related to the occurrence of these events" (p. 381).

Disabilities: As defined by Merriam-Webster (1972) disabilities are the "Condition of being disabled: lack of ability, power, or fitness to do something" p.208. For the purpose of this study disabilities include those categories defined by N.J.A.C. 6A:28 and Section 504 of the Rehabilitation Act and include Specific Learning Disabilities, Multiply Disabled, Communication Impaired, Visually Impaired, Tourette's Syndrome, Obsessive Compulsive Disorder, and Attention Deficit Hyperactivity Disorder.

Self-Concept: In general terms, self-concept is our perception of ourselves, in specific terms it is our
"attitudes, feelings, and knowledge about our abilities, skills, appearance, and our social acceptability" (Bryne, 1984, p.429) This study is will specifically investigate self-image, academic self-confidence, social self-confidence and general self-confidence.

Hypotheses

Inclusion of students with disabilities in regular education programs is not only widely supported in the literature, but also mandated by Federal Law. There is also sufficient evidence to support the implementation of a social skills training program in Inclusive educational settings. However, the effectiveness of such programs has been inconsistent. This study is being designed in an attempt to determine what other variables effect a student’s ability to acquire prosocial behaviors when these skills are directly taught. It is hypothesized that if it can be determined what role, if any, the variables of achievement and or intelligence levels, locus of control, and self-confidence play in a students ability to acquire prosocial behaviors, than efforts to develop prosocial behaviors will become more effective.

Hypothesis 1: There will be a significant gain in prosocial behaviors for students who participate in the Social Decision Making-Problem Solving Program.

Hypothesis 2: Higher achieving pupils will develop significantly
higher levels of prosocial skills than their lower achieving and disabled peers.

H: There will be a significant relationship between a student’s locus of control and his or her ability to attain higher levels of social functioning.

H: There will be a significant relationship between a student’s level of self concept and his or her ability to attain higher levels of social functioning.

H: For students with disabilities, there will be a significant relationship between intelligence level and the attainment of social skills.

Significance of the Study

This study is working from the assumption that students with disabilities are generally less adept in their prosocial development than their nondisabled peers. Further, the traditional methods of working with these students in isolated settings has been proven ineffective in producing social skills which can be generalized into other settings. While early interventions focused primarily on pupils with disabilities, a rise in school violence and student drug use has caused the federal government to address this issue and has included social learning goals in the National Educational Goals for the Year 2000. Recent research (Jackson, 1987; Bandura, 1986) views the acquisition of prosocial behaviors as multifaceted and highly complex.
While researchers and writers of newer social learning programs stress the value of their individual programs, it is important and necessary to determine what factors within a student will contribute to or detract from the ability to acquire prosocial behaviors. By finding which factor or factors play a significant role in the acquisition of prosocial behaviors, teachers and curriculum writers can then be certain to address these areas in an effort to present a more appropriate and effective program to students with disabilities.

This study is timely as the concept of prosocial behavior is relatively new. Efforts have gone into developing programs in response to both the Inclusion movement and the Goals for the Year 2000. This study will be significant because it will look into specific components of learners to determine how to better address the individual needs of these students.

**Limitations**

Generalizability of this study will be limited to suburban, white middle class students in grades three through eight, with and without disabilities. It will be limited to students with disabilities who are either included in their regular education classes all day with the assistance of an aid, or who attend a Resource Center for up to one half of the student’s instructional day. This
study will be limited to the following disabilities: specific learning disability, visually impaired, multiply disabled, communication impaired, Tourettes Syndrome with Obsessive Compulsive Disorder, and Attention Deficit Hyperactivity Disorder. The sample size for the various disability categories is a limitation because of the limited number of subjects for each disability category.

This study will include pre and post measures to determine the impact of the SDM-PS program on student ability to develop prosocial behaviors. It will also attempt to determine if there is a correlation between the factors of LOC and self concept in acquiring prosocial skills. It will not study other variables such as teacher effectiveness, parenting, or socio economic levels of the students. Other limitations are that instruction provided to help pupils acquire prosocial behaviors is being offered through SDM-PS readiness level. It is offered only in the mainstream, once each week, in each student's language arts class and is taught by a regular education teacher. The teachers have participated in a two day training, with a one day follow up session.
CHAPTER II

Review of the Literature

Introduction

The purpose of this study is to determine the effectiveness of the Social Decision Making-Problem Solving (SDM-PS) program in improving prosocial behaviors in school age children, specifically those with disabilities. Further, this study will investigate the impact of the factors of locus of control and self-confidence in the acquisition of prosocial behaviors. For students with disabilities, this study will also investigate the role of intelligence in acquiring these skills.

This chapter will provide both an overview and a detailed, critical discussion of relevant literature. It will begin with an overview of various theories and definitions of social skills. A discussion of intelligence, locus of control, and self-concept will follow this. Additionally, in depth reviews of studies conducted regarding the role of intelligence, locus of control and self-confidence in acquiring academic and prosocial behaviors for both students with and without disabilities will be discussed. Finally, this chapter will investigate social skills training, with a focus on social decision making and problem solving techniques and the effectiveness of these in promoting prosocial behaviors.
Social Skills Development

A review of the literature related to defining social skills reveals that there is no one definition or theories of social skills. This is due perhaps to the fact that historically social behaviors were originally studied in terms of negative or deviant behaviors, with research emerging later which began to study both the positive and negative components of social behaviors or skills (Gresham, 1981). Some define social skills as those behaviors which are either positively or negatively reinforced, how negative behaviors are suppressed or punished, and the ability to which a child can exhibit behaviors which will not be suppressed or punished by others (Gresham, 1981; Wilkinson & Canter, 1983). Put into positive terms social skills may be viewed as "learned behaviors that individuals use in interpersonal situations to obtain or to maintain reinforcement from their environment" (Kelly, 1982, p.3). Others view social skills as those skills needed to be accepted by peers with the underlying assumption being that those children who are more accepted by their peers are more socially competent (Howes, 1988; Gresham, 1981). Social skills are also defined is specific terms related to skills or behaviors, such as ability, performance, and self-control deficits (Gresham, 1981).
Eisenberg and Mussen (1989) set a definition, which eliminates looking at the totality of social behaviors by narrowing their definition to only prosocial skills, which are those "voluntary actions that are intended to help or benefit another individual or group of individuals" (p.3). They go on to distinguish prosocial behaviors from altruistic behaviors. While the intended outcome of social behaviors is positive, these can be performed for a variety of reasons such as the gaining of a reward or the winning of approval. Conversely, altruism "...refers to one specific type of prosocial behavior—voluntary actions intended to benefit another that are intrinsically motivated—that is, acts motivated by internal motives such as concern and sympathy for others, or by values and rewards rather than personal gain," (p.3).

Smetana (1993) take another approach and discuss social skills development as the learning of social rules in order to become a capable member of society. These rules are of two domains; moral or those related to acts of right and wrong directed towards others, and conventional or those which a particular society imposes upon its members, such as dress, greetings, etc. Smetana and Bennett believe that the acquisition of these rules is a developmental process with the learning of moral rules occurring in younger children prior to acquiring social rules. The learning of
social or conventional rules occurs later in childhood and through social interactions.

The development of social skills is also viewed as being interdependent upon a child's language development (Brinton & Fujiki, 1993; Gallagher, 1993; Wilkinson & Canter, 1983). Gallagher states that when "...the language code is used to communicate, the result is an inherently social phenomenon," (p. 199). Wilkinson and Canter support this theory and define social skills as those "...verbal and non-verbal behaviors which are the means by which people communicate" (p. 3). The influence of language development upon social skills development is significant according to these researchers. Gallagher (1993) believes that children with limited language abilities are restricted in their social skills development due to an inability to communicate effectively; these children are frequently misunderstood, unable to deal with conflicts verbally, and have difficulty establishing and maintaining higher levels of play. Further, Gallagher discusses the need for adolescents to be able to internally mediate their behaviors through language and how this is critical to the developing and maintaining of friendships and social interactions.

Elias and Clabby (1992) view the development of social skills as a complex process and define social skills as a
social-problem solving process which involves skills related to "...self-control, social awareness, group participation, and interpersonal decision making" (p.xiii). It is their belief that there are many highly intelligent people who do not achieve success because they do not possess appropriate prosocial behaviors. Elias and Clabby (1997) indicate that in addition to developing social skills in students, it is equally important to address the development of self control, self confidence, and self worth and see these variables as dependent upon one another.

The basic underlying themes of the theories and definitions presented here is that social or prosocial skills are those skills which are necessary for a child to be effective or competent in interacting with others. While on the surface, it may appear obvious as to what skills are necessary for appropriate interaction, what becomes important is the understanding of the extreme number of social contexts in which children function and the various types of social skills necessary to be effective in those various situations. Dodge and Feldman (1990) suggest that social competence is situational and that while a child's behavior may be appropriate in one situation, that same behavior may be inappropriate in another. Therefore, they suggest that interventions should focus on developing a
child's social cognition. Bandura's Social Cognitive Theory (1986) further underscores the complexity of the development of social competency. Gresham (1992) separates social skills and social competency by describing social skills as those acts or behaviors that a person demonstrates in certain situations. Whereas, he finds competency to be the judgement placed on that behavior by either others or the person performing the behavior. Gresham goes on to define social skills as follows: "Based upon a social validity conceptualization, social skills can be defined as socially significant behaviors exhibited in specific situations which predict important social outcomes for children and youth" (p. 350). For the purpose of this study, it is therefore necessary to understand other variables, such as intelligence, self-concept, and locus of control, and how these factors may or may not impact upon a child's ability to develop significant prosocial behaviors.

Intelligence

Theoretical Models

Intelligence has been described and defined in many different ways throughout the years. Mussen, Conger, Kagan (1969) believe "...intelligence is best defined as the ability to benefit from experience, the ease with which a child learns a new idea or a set of behaviors, and the limit to which a person might profit from experience"
Cognitive theorists such as Piaget, view intelligence as dynamic. Piaget (Hergenhahn, 1976) perceived intelligence as that which would allow an individual to interact effectively with his or her environment and develops in stages throughout a child's lifetime. According to Piaget, the environment is constantly changing and therefore, interactions between an individual and the environment also change. Piaget defines intelligence as "... a dynamic trait since what is available as an intelligent act will change as the organism matures biologically and as it gains experience" (p.269).

Bandura (1986) also views cognition or intelligence as a complex process and indicates that cognitive processing is interdependent with self-efficacy. That is to say that one's belief in one's ability can either influence or impair one's performance. Further, Bandura states that there is a difference in acquiring a skill and being able to perform that skill effectively in a variety of situations. "If people are not fully convinced of their personal efficacy they rapidly abandon the skills they have been taught when they fail to get quick results or it requires bothersome effort" (p. 733). Therefore, Bandura believes it is important to provide efficacy improvement strategies when attempting to improve cognitive functioning.
With regard to this study, Piaget’s and Bandura’s models of cognition would be more relevant as the purpose of this study is to determine the importance of interactions between cognition, Locus of Control, and self concept with regards to the acquisition of prosocial behaviors for a child with a disability. As previously stated, children with disabilities are frequently targeted as being less socially competent than their non-disabled peers are. This study is attempting to determine if this lack of social competence does exist and if it does to what extent does IQ play a role in it’s development. Further, it is important to determine if these variables correlate differently with students who are either high achieving, average achieving, or disabled.

Cognition and prosocial ability

Eisenberg and Musser (1989) indicate a moderate correlation between intelligence and altruistic behaviors. They cite three studies, two of which were observational, and one which addressed verbal intelligence specifically. The findings indicate a positive but low correlation between intelligence and altruistic behavior. It was the conclusion of Eisenberg and Musser that “... more intelligent children may be better able to detect the other’s need, role take, and figure out a way to assist” (p. 109). Further Eisenberg and Musser state that skills
needed to be prosocial or socially competent include
cognitive skills of being able to perceive subtleties in
situations and know how to react. This would include being
skilled in social problem solving. Additionally, Eisenberg
and Musser refer to research completed that tests Piaget’s
stages of moral judgement. While no statistical data was
available through Eisenberg and Musser, they concluded that
as children mature they are more likely to view prosocial
acts that are altruistically based as more kind than those
acts which are performed for selfish reasons. This research
supports Piaget’s theories of moral development and also
corresponds with his stages of cognitive development.

Goleman (1995) views social competence as independent of
cognitive intelligence and points to cases of highly
intelligent individuals who are socially incompetent. It is
his theory that humans possess not only a cognitive
intelligence, but also an emotional intelligence. Goleman
claims that those who follow a cognitive science model of
the mind, even those who adhere to the concept of multiple
intelligences, view intelligence from a cognitive model
which he defines as "...the understanding of oneself and of
others in motives, in habits of working, and in putting
that insight into use in conducting one’s own life and
getting along with others" (p.40). He believes that by
focusing on the cognition or understanding of these
feelings, theorists and researchers have forgotten the role of the feelings with regards to intelligences. Goleman (1995) believes that there are many emotional intelligences and that social intelligence is one of those. He defines one who is adept at social intelligence as one who "... can connect with people quite smoothly, be astute in reading their reactions and feelings, lead and organize, and handle the disputes that are bound to flare up in any human activity" (p.119-120). According to Goleman's theory, that is why studies such as those conducted by Eisenberg and Musser find moderate and inconsistent correlations between prosocial behaviors and intelligence.

A study (Gresham, Mac Millan, & Bocian, 1996) conducted which included 152 pupils in grades two through four and consisted of students with Learning Disabilities (LD), low achievement levels (LA), and mild mental retardation (MMR), found no difference among these three groups in their acquisition or functioning level in the area of social skills. Social skills functioning was assessed through teacher ratings using Gresham & Elliott's Social Skills Rating System (SSRS). The cognitive functioning levels of these three groups was determined using the Wechsler Intelligence Scale for Children-III (WISC-III) with average scores as follows: 67 pupils with learning disabilities had a full scale IQ score ≥ 82; the 40 pupils with LA had IQ
scores ≥ 76; and the 45 students with MMR had IQ scores <75. As there was no significant difference in the social skill functioning level as determined through teacher rating, these results indicate that there is no correlation between level of IQ and the ability to acquire social skills for students with disabilities, which supports Goleman’s theory, but is contradictory to other researchers (Eisenberg and Musser, 1989; Smetana, 1993).

**Locus of Control**

Dudley-Marling, Snider, and Tarver (1982) define locus of control (LC) as the extent to which an individual perceives his or her successes or failures as either dependent upon or independent upon their own behaviors. Internality would be the attributing of one’s success or failure to internal factors such as effort or ability, whereas, externality would be when one views success or failure as being the result of an external factor such as luck, chance, or environmental variables.

Early findings regarding LC are inconsistent as to the relationship of LC to intelligence and achievement. Duke and Nowicki (1974) conducted research involving 48 junior year college students, 22 male and 26 female. The Adult Nowicki Strickland Internal External Scale (ANSIE) was administered to all subjects. Results from the ANSIE were compared to GPA and SAT scores. Results indicate that an
internal LC was strongly related to SAT scores for male students \( r = -0.50, p < 0.02 \). Results for female students indicate that a more external LC was significantly correlated to SAT scores \( r = 0.39, p < 0.05 \) Duke and Nowicki explain the reasoning for the trend towards externality in female college students as cultural in that female students were not expected to outperform their male counterparts. Therefore, the successful college women viewed their success as being controlled by external events as opposed to their own innate abilities.

Brown (1980) refutes these findings. His study was conducted using twenty-five adolescent female and 33 adolescent male students. This study examined the relationship between LC, academic achievement, and intelligence. Using the Nowicki-Strickland Locus of Control Scale for Children, Brown found no significant correlation between achievement and LC for either boys or girls. However, he did find a significant correlation between intelligence and LC for both boys \( r = 0.62, p < 0.01 \) and girls \( r = 0.60, p < 0.01 \). While Brown states that these results question the results of Duke and Nowicki, the noticeable difference in these two studies is the age of the subjects and that LC was at that time was generally viewed as a personality factor.

Dudley-Marling, Snider, and Tarver question whether or
not locus of control is actually situational and not a personality factor. In their review of literature, Dudley-Marling, Snider, and Tarver found in a quasi longitudinal study of students in grades 2, 4, 6, and 8, with a sample consisting of 20% of the higher functioning pupils and 20% of the lower functioning pupils that there is no difference in internality among second graders. However, by fourth grade internality increased for the higher achieving students. Further, from grade 4 through 8, internality was significantly lower for the lower achieving pupils than for the upper 20%. These researchers suggest that by viewing locus of control as a personality trait, externality may than be viewed as a disability. If locus of control is viewed as situational, than externality is invoked when one's self-control is minimal. To further support this theory, Dudley-Marling, et al. cite research that finds pupils with LD to take responsibility for their failures, that is to say, pupils with LD perceive their failures as directly related to their shortcomings. Conversely, pupils with LD tend not to accept or internalize their successes. This is contradictory to earlier findings which associates externality with academic failure and internality with success.

Tolor, Tolor, and Blumin (1977) found similar results. In a study involving 28 primary level pupils identified as
requiring special education (sped), and 28 normally functioning students, there was no difference in the groups with regards to locus of control. They did find a mild but insignificant interaction between internality and self concept for the students of normal functioning and a slight relationship between externality and self concept for the students requiring sped. These researchers interpreted this as a type of defense mechanism on the part of the students requiring sped as they "...might tend to defend themselves against a loss in self esteem by assuming less personal responsibility for their own inadequacies" (p.49).

A review of the literature indicates that studies tend to investigate both Locus of Control and Self Concept particularly when the research is conducted with students with disabilities (Durrant, 1995, Rogers & Saklofske, 1985, Omizo, Cubberly, & Longano, 1984, Tolor, Tolor, & Blumin, 1977). Prior to exploring research in these areas, it is necessary to gain a better understanding of self-concept.

**Self Concept**

Broadly defined self concept is the perception that one has of one's self which would include one's perception of attitudes, feelings, and knowledge about one's abilities, skills, appearance, and social acceptability (Bryne,1984). Other broad definitions view self-concept as "...a steady state which attempts to maintain an orderly arrangement of
elements" (Frey & Carlock, 1989). However, other researchers (Walker & Debus, 1991; Vaugh, Elbaum, & Schumm, 1966) propose that self concept is more multidimensional and that there are types of self-concepts. These would include self concepts related to specific academic areas and a global or general self-concept related to how one feels about his or herself outside of the academic arena.

Research related to self-concept for both the general student population and students with disabilities, tends to support the multi dimensional theory. A study (Walker & Debus) of 410 fifth grade students from Sydney, Australia, found no correlation between measures of general self-concept (GSC), and academic achievement (AA). However, there was a high correlation between achievement in a specific area and the student's self-concept in that same academic area or academic self-concept (ASC). Further, there was a small negative effect on other academic self-concept areas. Specifically, if a student rated high in verbal self-concept, that same child's math self-concept would be lower than the verbal self-concept.

Bryne (1984), also views self-concept (SC) as multi dimensional, and views GSC and ASC as internally connected to SC. In an extensive review of research related to this multidimensional theory regarding SC, Bryne concluded that while GSC is distinct from ASC it is correlated to ASC.
Further, "The relationship between GSC and ASC is stronger than the relationship between GSC and the external variable of AA, but weaker than the relationship of ASC and AA" (p. 450). Bryne has interpreted these findings to mean that another component of SC is the ability to compensate. Specifically, overall SC in an individual seeks to maintain a balance between lesser performance of ability in one area with better performance or ability in another.

Vaughn, Elbaum, & Schumm conducted a study with 64 pupils with LD, from an urban setting, and who were fully integrated into regular education for a period of one year. They found the pupils with LD to have comparable general self-concepts with their low achieving and average to high achieving classmates in the areas of appearance, friendship, and self worth. However, their academic self-concepts were significantly lower than average to high achieving pupils. These findings are consistent with the findings of Grolnick and Ryan (1990) who found that there was no significant difference in the ratings of general self-concept for students with and without LD, but a significant difference in academic self-concept. Both studies used the same measure of self-concept so that a comparison of results is possible.

Jackson (1987) views self-concept as interdependent with communication effectiveness. Jackson states that mastery is
an important component of developing one's self esteem. Further, in order for a person to be accepted socially and interact effectively with others, one must be able to communicate effectively. This, according to Jackson, is critical for students with disabilities who traditionally experience difficulty in this area. Jackson cites research indicating that pupils with LD are rated by parents as being less sociable than their siblings without LD are. Other research finds pupils with LD to be uncooperative, less able to empathize than peers without LD, poor at reading social situations, respond inappropriately to social cues, and significantly antisocial. Yet the studies cited above found no difference in the level of GSC for the students with and without LD. Perhaps, this is due to the findings presented in Jackson's review that found pupils with LD to be less perceptive. Therefore, when rating their GSC, they perceive themselves to be better off than when rated by teachers, peers, or parents. Durrant (1995) explains these inconsistencies in research of students with disabilities a result of the population sample. It is her findings that typical studies involving students with disabilities do not differentiate among the subtypes of disabilities which impacts on the results.

**Self-Concept and Locus of Control**

The studies cited above were restricted to those that
examined the development of the independent variables of Locus of Control, and self-concept. It is now important to examine what effect these variables may have on the acquisition of prosocial behaviors. Typically, earlier research conducted regarding these variables examined the effect that these may have had on academic achievement. It is only recently that research has begun to examine the relationship of these variables to prosocial behaviors.

Rogers and Saklofske (1985) conducted a study which investigated general and academic self-concepts, general and academic locus of control, and academic performance expectations. The study included 45 students with LD and 45 non-disabled (NA) students aged seven years six months through twelve years nine months. The researchers found a significant difference in these affective areas (p<.001). These findings indicate that the LD students tended to have lower general and academic self-concepts, had higher rates of externality for both academic and general locus of control measures, and expressed lower academic expectations.

Grolnick and Ryan (1990) found that when students with LD were matched according to IQ level to students without LD, the self-perception of academic competence was lower for the student with LD than that of the peers without LD. There was no difference among groups in terms
of perceived general competence. With regards to Locus of Control, there was a significance difference between the pupils with LD and pupils without LD, with the pupils with LD perceiving academic success and failure as controlled by "powerful Others" (p.182).

Hall, Rouse, Bolen, and Mitchell (1993) conducted a study of 84 fourth, fifth, and sixth graders, 42 LD, 42 NLD, from a rural eastern North Carolina School District. Results from this study found that the pupils with LD scored lower than the pupils without LD on scales of self-concept. Locus of Control for pupils with LD was more externally oriented than the students without LD. Further, the pupils with LD scored lower on the Intellectual Achievement Responsibility scale indicating that they tend to externalize both their academic successes and failures more than NLD pupils.

Social Skills Training

The research presented above examined the areas of intelligence, locus of control, and self-concept as well as provided a definition for social skills. The research is far from definitive with regards to how these variables relate to the acquisition of social skills. This section will examine social skills training and some of the relevant literature regarding the acquisition of such skills.
In an extensive review of social skills training for students with disabilities Gresham (1981) found that social skills training up to that date was lacking in several areas. First, social skills training not founded on a well-developed theory with regards to what skills needed to be addressed and how these skills would impact upon interpersonal relationships, specifically for students with disabilities. Studies conducted up to that time lacked evidence of the impact of social skills training in mainstream settings. Third, there was little evidence regarding the generalization of social skills from one setting to another. Gresham also stated that he believed after conducting this extensive review, that social skills training "...might be a two way street: attention must be paid to both handicapped and nonhandicapped participants in interaction" (p.168). Lastly, Gresham found that the literature did not point to any specific type of technique that was successful for a particular type of disability.

Since that time, research has become better defined. Walker, Schwarz, Nippold, Irvin, and Noell (1994) have identified two areas that social skills training needs to address. They believe that students need to have skills which will allow them to adhere to the demands of a classroom environment that is controlled by the teacher and that the student also needs to be able to respond to their
peers within a play setting. Social skills training throughout the years has been conducted through one of two models, a behavioral model that addresses specific skills, or a cognitive problem solving approach. (Gresham, 1981, Walker, et al., 1994) Walker et al. found that the results of these two methods show that when skills are targeted, the skills improve with little to no impact upon a child’s ability to problem solve. Also, when problem solving strategies are stressed, little to no improvement has been shown in the area of skills development.

Berg (1982) conducted a study to attempt to determine what, if any, characteristics impacted upon social problem solving ability and if there were differences in the social problem solving abilities of disabled and nondisabled students. Findings were that there were significant differences in the problem solving abilities of disabled and nondisabled boys. Boys with learning disabilities typically generated responses of lower quality and generated fewer alternatives to problem situations. This study found there is a significant relationship between problem solving ability and self-esteem. Further an internal locus of control was significantly related to good problem solving ability. Students who exhibited high levels of impulsivity, low frustration tolerance, and a need for immediate gratification, regardless of having a disability,
were found to have poorer problem solving abilities. The most significant finding in this study was that those students who demonstrated poor social problem solving had lower cognitive ability, specifically in the area of abstract reasoning.

Larson (1989) conducted a study with 87 sixth grade urban male students who had been identified as high risk by the teachers. These students had been identified based upon poor academic performance and behavioral difficulties. The study consisted of assigning the students to an experimental and control group. The experimental group received training in social skills using Larson’s Social Thinking Skills program. The control group also met in small groups, but was trained in “values clarification” (p.36). Upon entering seventh grade, a maintenance-training program was implemented. Overall findings indicate that those students in the experimental group exhibited less frequent and not as severe inappropriate behaviors as the students in the control group. The students from the experimental group were better at self-monitoring their behavior than the control group who exhibited fewer options in problem situations. Further, the students in the experimental group showed an increase in academic grades and demonstrated better work habits after training.
Social Decision Making and Problem Solving

In developing the Social Decision Making and Problem Solving program (SDM-PS), Elias and Clabby (1997) focused on the skills that today's students would need to become successful adults. Further, building upon past research, this program was developed to address skill areas as well as social problem solving and to provide the training in natural settings. The area of concern became the area of problem solving. It is their premise that the ability to "...respond thoughtfully in decision-making or problem solving situations" (p.5) is a major factor in being prepared for and being successful in the adult world. The skills needed to perform these are referred to as social problem solving and decision making skills. The ability to perform social problem solving and decision making appropriately requires basically three areas of competence. Elias and Clabby stress that students need to possess critical thinking skills as well as the ability to goal set. Second, the students must have prerequisite skills of listening, self-control, and the ability to work in a group. Finally, student must be able to apply these skills in various situations, both academic and social, throughout the day. SDM-PS and SSM-PS Readiness level are developed in a way that will address these areas by providing direct instruction in these areas.

Prior to the writing of SDM-PS, a longitudinal study (Elias, Gara, Schuyler, Branden-Muller, & Sayette, 1991) was
conducted on a similar program developed by Elias and Clabby, the Improving Social Awareness-Social Problem Solving Project (ISA-SPS). The program was similar to SDM-PS in that it also focused on developing problem solving and decision making skills as well as readiness skills of self-control, group participation, and social awareness. The study followed students in grades nine through eleven who had experienced the ISA-SPS in grades four and five. The participants were from four different elementary schools within the same district. The study included three groups, two experimental groups ($E_1, E_2$) who had taken part in the program in elementary school, and a control group that had not participated in the program. Within the experimental groups, two subgroups were established; one in which the students received a high level of training ($E_1$) and one which received a moderate level ($E_2$). The students were asked to complete the National Youth Survey (NYS) and the Youth Self Report (YSR). From these scales, five sets of dependent variables were considered. These included social competence, psychopathology, self efficacy, anti social and destructive behavior, and academic achievement (Measured by the CTBS).

Data from a six year follow up indicated that the two experimental groups did perform better overall academically than the control group. Further, the participants from the
experimental group who received a high level of training demonstrated significantly lower levels of absenteeism than both of the other groups. Through analysis of variance, it was established that the experimental groups exhibited lower levels in the use of illegal substances and lower incidences of vandalism and violence. With regard to the psychopathology indices, significantly high levels of unpopularity and self-destructive behaviors in boys was found among the control group. Control group boys also exhibited higher levels of depression. Girls in the experimental groups displayed significantly higher levels of social competence than girls from the control group displayed. While the results were not always significant, the results did indicate a positive trend for those pupils who had participated in this program. Further, the students studied had not had formal instruction in this program since the end of elementary school and were able to generalize the skills learned well into their High School career.

**Summary**

Review of the literature finds the development of prosocial skills to be a highly complex process. What is inconsistent is what factors are included in this complex process. Most of the researchers cited above agree that prosocial behaviors are those behaviors necessary to interact appropriately with others. What is needed to develop these
skills is still under debate. There are those (Eisenberg and Mussen, 1989) that believe that intelligence is correlated to the attainment and others who disagree (Goleman, Elias & Clabby). Others believe that verbal competency is necessary (Brinton & Fujiki; Gallagher, Wilkinson & Gallagher, Walker et al.). The studies cited regarding locus of control and self-concept tend to look at the relationship of these variables to academic achievement with little mention of the relationship of these factors to prosocial behaviors. Only Jackson cites research that looks at the relationship between self-concept and social competence. While some of the studies cited found little to no relationship between locus of control and self-concept, these studies were looking at the effect of these two variables with academic achievement. Since the field of prosocial development is as Eisenberg and Mussen (1989) State, relatively new, it is apparent that research should now begin to focus specifically upon locus of control, intelligence, self-concept and the acquisition of prosocial skills in natural settings.
CHAPTER III
Methodology

Introduction

The general purpose of this study was to determine if participation in the Social Decision Making and Problem Solving Program (SDM-PS) would foster the development of prosocial behaviors in children. Further, this study sought to determine if higher achieving (HA) students would outperform their average achieving (AA) peers and peers with disabilities (SPED) in this area as well. This study also examined the relationship of the variables of Locus of Control (LOC) and self-confidence (SC) in the acquisition of prosocial behaviors. Additionally, for students with disabilities, the relationship between intelligence and the acquisition of prosocial skills was explored.

The intent of this chapter will be to present the research design used for this study. This study compared the progress of students with and without disabilities who took part in the SDM-PS program over a period of four months.

This chapter will begin with a description of the subjects who participated in this study, as well as a description of the school district in which this study was conducted. A description of the instruments used to gather data will be presented and attention will be given to the reliability and validity of those instruments. This will be
followed by an explanation of the data collection procedures and data analysis. This chapter will conclude with an explanation of the hypothesis testing.

Subjects

Students who participated in this study were from a small suburban, middle class K-8 district in Northern New Jersey. The district is comprised of one school which houses approximately 277 students. The proposed research design included sixty participants; twenty with disabilities, twenty from the upper third of their respective grade level as determined by the results of the 1999 California Test of Basic Skills (CTBS) and twenty from the lower third of their respective grade levels. After seeking permission from parents of the student district students and sending a series of three request letters to parents, responses were received which allowed for fifty-one participants. Further no responses were received from parents of students in the lower third of the class, but there were responses from parents of students who were within the Average or middle range of their respective grade levels. Therefore, the original research design was modified to accommodate this sample population. The students were assigned to one of three categories, High Achieving (N=24), Average Achieving (N=11), or disabled (N=16). The 1999 CTBS Total Composite score was used to assign students to either the High
Achieving or Average Achieving category. High Achieving students had performed within the upper third of their respective grade levels, while the Average Achieving students performed within the middle third. While all students in the school were invited to participate in this study, no responses were received from student who would have been considered Low Achieving. The students were also grouped according to grade levels, elementary which included grades three through six (N=40) and secondary which included grades seven and eight (N=11).

The students with disabilities were identified according to either N.J.A.C. 6A:28 as Eligible for Special Education and Related Services or Section 504 of the Rehabilitation Act as having a disability. All students with disabilities were in regular education classes for at least one half of their school day. Disabilities included Specific Learning Disabilities, multiply handicapped with visually impaired being the primary disability, Communication Disordered, Visually Impaired, Tourettes Syndrome with Obsessive Compulsive Disorder, and Attention Deficit Hyperactivity Disorder. Three of the boys were taking medication for their disabilities.

Description of the Social Decision Making-Problem Solving Program

The Social Decision Making and Problem Solving Program,
readiness level, was adopted by this school district and implemented in grades Kindergarten through eight. For the purpose of this study, students in grades three through eight were included as to allow for the use of student self rating assessment measures. Topics covered in grades Kindergarten through fourth included self control skills such as listening carefully, keeping calm, presenting yourself in appropriate ways, coping with hassles, learning to role play, and choosing friends. For students in grades five through eight skills taught also included “Speaker Power,” how to identify and take charge of trigger situations, how to communicate appropriately and assertively, identifying with put downs, and how to give positive feedback to peers. Formal instruction took place once each week in language arts class. Students who would normally be in the Resource Center during this time, returned to the mainstream to take part in these lessons with their nondisabled peers. Resource Center teachers were available to assist or co-teach with the regular education teacher.

**Instruments**

The following instruments were chosen to measure the independent variables: Weschler Intelligence Scale for Children-III (WISC-III), the Student Self Concept Scale (SSCS) (Gresham, Elliot, & Evans-Fernandez, 1993), and the
Children’s Nowicki-Strickland Internal-External Locus of Control (CNSIE). The dependent variable of prosocial development was assessed using the Social Skills Rating System (SSRS) (Gresham & Elliot, 1990).

Other instruments were considered for use in this study. The Behavior Assessment System for Children (BASC), written by Reynolds and Kamphaus in 1992 (Flanagan, Alfonso, Primavera, Povall, & Higgins, 1996) was considered. Both the BASC and the SSRS are considered as “two of the most technically adequate” (p. 14) instruments for assessing social skills in school age children. However, research (Flanagan, et.al.) indicates that the BASC subscales of social skills has been correlated with measures of social problems and not with measures of social competence. Whereas, Flanagan, et.al., cite research indicating that the SSRS “...is one of the most psychometrically sound rating scales for young children” (p.14).

With regards to measures of self-concept, only one other measure was considered the Multidimensional Self-Concept Scale by Bracken. However, this scale was found to be unsuitable for this study because it does not include norms for students in grades three and four.

Another measure of Locus of Control reviewed was the Intellectual Achievement Responsibility Questionnaire (IARQ) (Crandall, Katkovsky, & Crandall, 1965) however, upon
review of this measure of Locus of Control, it was
discovered that this scale measures Locus of Control with
regards to intellectual-academic success and failure. Since
the purpose of this study is to investigate the acquisition
of prosocial behaviors, the IARQ was deemed inappropriate
for this study.

Wechsler Intelligence Scale For Children-III

The WISC-III (Wechsler, 1991) is an individually
administered intelligence test for children ages six through
sixteen years, eleven months, and is administered by a
trained examiner. The test yields Verbal, Performance, and
Full Scale IQ scores and consists of thirteen subtests; six
verbal and five performance with two supplemental
performance subtests, Symbol Search and Coding. Reliability
coefficients for all but the Coding and Symbol Search
subtests were estimated using split half correlations and
were corrected by the Spearman-Brown formula. The average
$r=.96$ for the Full Scale score; $r=.91$ for the Performance
score; and $r=.95$ for Verbal scores. There is significant
support for the validity of the WISC-III and there have been
numerous comparative studies between the WISC-III and other
tests of intelligence and achievement. Further, this test
has been used in studies with special populations, Learning
Disabled, Gifted and Talented, and Mentally Retarded
children.
The Children's Nowicki-Strickland Internal-External Locus of Control (CNSIE).

The CNSIE was developed based upon "Rotter's definition of internal-external control of reinforcer dimension" (Nowicki & Strickland, 1973, p. 149). It is a forty item scale completed by the individual and uses a paper and pencil format. Biserial item correlations were found for male and female children and were found to be consistent across ages. Tarnowsky and Nay (1989) report support for both internal consistency and test-retest reliability.

The Student Self-Concept Scale

The SSCS is a 72 item, student self report measure that assesses self-concept in three areas. The scale was developed based upon Bandura's self efficacy theory and measures self-concept in the areas of academic, social, and self-image. The students rate themselves along three dimensions: self-confidence, importance, and outcome confidence. Measures of internal consistency indicate that the SSCS has a high degree of homogeneity. Coefficient alpha reliabilities yield a median=.90 for the Self-Confidence composite and a median=.81 for the Outcome Confidence Composite ratings. Gender and educational level did not yield a significant variation in consistency (Gresham,
The Social Skills Rating System

The SSRS was developed as a rating system to assess a student's level of social skills functioning. This instrument consists of scales that can be completed by the teacher, parent, and for grades three through twelve, the student. There are three scales, Social Skills, Problem Behaviors, and Academic Competence. Included in the SSRS are the areas of Cooperation, Assertion, and Self Control. All forms (parent, teacher, and student) measure Cooperation, Assertiveness, and Self Control. The parent rating also includes a measure for Responsibility, while the student version includes a subdomain for measuring Empathy. Standard Scores are grade based and percentiles are yielded for the total scale score of each rating scale. Coefficient ratings for parent ratings yielded a median $r = .77$. Median $r = .89$ for teacher ratings and no coefficient ratings were reported for student ratings (Flanagan, D.P., & Alfonso, V.C., 1996). However, there is evidence for validity of the student rating form based upon factor analyses, patterns of intercorrelations, correlations with other instruments, and developmental changes. Further, much effort was devoted to assuring for content validity.
Procedure

Permission to conduct this study was obtained from the district superintendent of schools and the Board of Education. Parental consent forms, accompanied by a letter of explanation (Appendix A), were sent to all students in grades three through eight. All students in the school, both classified and non-classified, were participating in the Social Decision Making-Problem Solving program, readiness level (Elias, Clabby, & Bruene Butler, 1996). This program was being taught by the regular education language arts teachers, one period each week in grades Kindergarten through eight. Students from the Resource Center took part in this program within a regular education setting along with their nondisabled peers. The SSRS was administered to all students within the district as a pre-test measure during the first two weeks in February, 1999 and again administered during the first two weeks in June, 1999 as a posttest measure. Scores for the participants of this study were then obtained, with permission, from student files. WISC-III scores for the students with disabilities were also obtained with parental permission from the pupils’ confidential files.

Once permission was obtained from the parents, students were then grouped according to grade level, gender, and academic achievement level or category. Testing procedures
were explained to the students and student assent forms were collected before administering either the Student Self Concept Scale or the Children's Nowicki-Strickland Internal External scale. The SSCS and the CNSIE scales were administered in groups of three to four children. For students with disabilities, items were read aloud to each child so as to guard against any reading inability. The researcher scored the measures according to the standardized methods inherent in each test.

Data Analysis

As the SSRS consists of two scales, one for students in grades three through six and one for students in grades seven through eight, all data were analyzed accordingly. The data were analyzed so as to determine if the SDM-PS did improve prosocial functioning of the students. This was accomplished through applying a t Test for Matched pairs. The t Test for Matched pairs was chosen as the pre and post test measure of the SSRS and allowed for using repeated measures thereby reducing variability, as well as the standard error (Witte & Witte, 1997). This type of analysis also allows for greater sensitivity in testing the first null hypothesis that states that there will be no significant gains in prosocial behaviors for students who participate in SDM-PS.

The second hypothesis was tested using ANOVA. ANOVA is
the appropriate data analysis technique for this hypothesis because it assesses the relationship between independent variables and a constant dependent variable (Newton & Rudestam, 1999). The Scheffe Test of Multiple Comparisons was also conducted in an effort to guard against any Type I errors (Witte & Witte) and to define where significant differences exist between groups.

Next data were analyzed to determine if there was a relationship between the independent variables of Locus of Control, Self-Concept, and Intelligence and the dependent variable of prosocial behavior. Correlation coefficients were computed for the last three hypotheses to determine the strength of the relationship between these independent variables and the dependent variable of prosocial behavior as measured by the SSRS.

Hypotheses Testing

$H_01$: There will not be a significant gain in prosocial behaviors for students who participate in the Social Decision Making-Problem Solving program.

$H_11$: There will be a significant gain in prosocial behaviors for students who participate in the Social Decision Making-Problem Solving program.

$H_02$: Higher Achieving pupils will not develop significantly higher levels of prosocial skills than their lower achieving and disabled peers.
$H_{a2}$: Higher Achieving pupils will develop significantly higher levels of prosocial skills than their lower achieving and disabled peers.

$H_{a3}$: There will be no significant relationship between a student’s Locus of Control and his or her ability to attain higher levels of social functioning.

$H_{a4}$: There will be a significant relationship between a student’s level of self-concept and his or her ability to attain higher levels of social functioning.

$H_{a5}$: There will be a significant relationship between a student’s level of self-concept and his or her ability to attain higher levels of social functioning.

$H_{05}$: For students with disabilities, there will not be a significant relationship between intelligence level and the attainment of social skills.

$H_{a5}$: For students with disabilities, there will be a significant relationship between intelligence level and the attainment of social skills.

**Decision Rule:**

Reject $H_0$ at the .05 level of significance.
CHAPTER 4

Analysis of the Data

Introduction

The purpose of this study was to determine if the implementation of the Social Decision Making-Problem Solving program (SDM-PS) would promote the development of prosocial behaviors for students with and without disabilities. Further, this study sought to determine if the independent variables of achievement levels, locus of control, or self-concept related to the acquisition of such skills. The results of this study are examined in this chapter. The first part of this chapter will present comparative data for the dependent variable of prosocial behavior as measured by the Social Skills Rating System (SSRS) (Gresham & Elliott, 1990). Each hypothesis will then be presented and data analyzed to either support or reject the null hypotheses. Analysis of data regarding the independent variables of pupil achievement levels, self-concept, and locus of control will be presented in conjunction with appropriate hypotheses.

Prosocial Skills as Measured by Social Skills Rating System

The Social Skills Rating System provides a measure of students' behaviors in the areas of cooperation, assertion, empathy, and self-control. Raw scores are obtained for each
domain and these are combined to yield a standard score, which is a measure of overall prosocial ability. The rating system utilizes two scales; an elementary scale for grades three through six, and a secondary scale for grades seven through twelve. Both scales were used for this study. The Cooperation subscale includes items such as, "I tell others when I am upset with them," and "I keep my desk neat and clean." The Assertiveness rating scale includes, "I make friends easily," and "I ignore classmates who are clowning around in class." Empathy includes "I smile, wave, nod at others," and "I listen to my friends when they talk." Items such as "I disagree with adults without fighting or arguing," and "I control my temper when people are angry with me," are included in the Self-Control domain. Each scale contains twenty items, some of which are scored in two domains.

This section of the chapter will examine the relationships among SSRS pretest and posttest domain and inter domain scores. While not directly related to a specific hypothesis, the purpose for comparing these scores is to identify performance trends that may help to clarify and or support data related to the various hypotheses.

General findings indicate that the elementary level scores tend to have stronger inter domain relationships than do the secondary scores. Secondary level scores are
generally not significantly related, but do indicate a trend towards moderate to low relationships that will be discussed in detail below. One possible reason for the lack of significance among the correlations at the secondary level could be the sample size of 11 pupils. Significance for correlations depends not only on the value of \( r \), but also on the sample size being compared (Witte & Witte, 1996). Therefore, while some of the correlations indicate that a moderate relationship exists, significance could not be achieved due to the small sample size.

Significant pretest inter domain correlations were found for the elementary level but not at the secondary level (See Table 1). There are high positive correlations between each individual social skill area and overall prosocial ability at the elementary level. Inter domain scores for the elementary pretest scores indicate a moderate correlation for all areas. Inter domain scores at the secondary level range from little to no relationship for cooperation and assertiveness \( (r=-.015) \) to a moderate inverse relationship between cooperation and self-control \( (r=-.554) \). This would indicate that secondary students who rated themselves high in the area of cooperation tended to rate themselves low in the area of self-control. Furthermore, there is a significant relationship between Empathy and overall prosocial ability \( (p<.05) \) indicating
Table 1

SSTS Pretest Correlations

Elementary Level

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self</th>
<th>Std. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>1.000</td>
<td>.680**</td>
<td>.626**</td>
<td>.549**</td>
<td>.844</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>1.000</td>
<td>.252**</td>
<td>.693**</td>
<td>.875**</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
<td>1.000</td>
<td>.598**</td>
<td>.795**</td>
<td></td>
</tr>
<tr>
<td>Self Control</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.815**</td>
</tr>
</tbody>
</table>

Secondary Level

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self</th>
<th>Std. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>1.000</td>
<td>-.015</td>
<td>.357</td>
<td>-.554</td>
<td>.395</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>1.000</td>
<td>-.195</td>
<td>-.094</td>
<td>.439</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
<td>1.000</td>
<td>.081</td>
<td>.670*</td>
<td></td>
</tr>
<tr>
<td>Self Control</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>-.220</td>
</tr>
</tbody>
</table>

Note:
*Correlation significant at the 0.05 level (2-tailed)
**Correlation significant at the 0.01 level (2-tailed)
*N=40
*N=11

that secondary students who rated themselves high in the area of empathy tended to have higher overall prosocial ability.

Posttest results indicate strong inter domain correlations at the elementary level and a trend towards significant relationships at the secondary level (See Table 2). Inter domain scores at the elementary level show a wider range in strength of relationships. Empathy
Table 2

SSRS Posttest Correlations

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self</th>
<th>Std. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>1.000</td>
<td>.789*</td>
<td>.322*</td>
<td>.740*</td>
<td>.807*</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>1.000</td>
<td>.345*</td>
<td>.821*</td>
<td>.833*</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>1.000</td>
<td></td>
<td>.508**</td>
<td>.613*</td>
<td></td>
</tr>
<tr>
<td>Self Control</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.900**</td>
</tr>
</tbody>
</table>

Secondary Level

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self</th>
<th>Std. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>1.000</td>
<td>.427</td>
<td>.653*</td>
<td>.704</td>
<td>.954**</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>1.000</td>
<td>.292</td>
<td>.257</td>
<td>.565</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>1.000</td>
<td></td>
<td>.229</td>
<td>.738**</td>
<td></td>
</tr>
<tr>
<td>Self Control</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.617*</td>
</tr>
</tbody>
</table>

Note:
*Correlation significant at the 0.05 level (2 Tailed)
**Correlation significant at the 0.01 level (2 Tailed)
*N= 40
*N=11

correlates at a low positive level with assertiveness (r= .345, p< 0.05), and cooperation (r= .322, p<0.05).

At the elementary level assertiveness and cooperation were found to be more strongly related at the posttest (r=.789) than at pretest(r=.680). Both scores indicate that elementary students who rate themselves high in the area of cooperation tend to also rate themselves high in the area of assertiveness. The strongest correlation for elementary
posttest scores is found between self control and the standard score ($r=.900$, $p<0.01$). This indicates that students who rated themselves high in the area of self-control tended to have high overall prosocial skills.

Although no significant relationships existed at the time of the pretest for the secondary level, significant inter domain relationships were found for the posttest (See Table 2). Posttest results indicate secondary students who tended to rate themselves high in the area of cooperation, also rated themselves high in the areas of empathy and self-control, and also exhibited higher overall prosocial abilities. Additionally, secondary students who rated themselves high in the areas of empathy and self-control, also exhibited higher overall prosocial abilities. Pretest/posttest comparisons of prosocial skills find significant correlations between the domains for the elementary level (See Table 3). This would indicate that students tended to rate themselves similarly for both the pre and posttests. Pre/post comparisons of prosocial skills for the secondary level found no significant correlations (See Table 4). There was a positive moderate relationship ($r=.525$) between the cooperation pre and post tests suggesting that students tended to rate themselves similarly in this area from pre to post test. A low inverse relationship ($-.381$) was found between the self-control pre
test and the self-control posttest indicating that students who rated themselves stronger in this area for the pretest, rated themselves lower upon post testing. Low positive relationships were also found between the Empathy pre and posttest \((r=.348)\) and the Standard Score pre and posttest \((r=.356)\).

Table 3

SSRS Pretest/Posttest Correlations for the Elementary Level:

<table>
<thead>
<tr>
<th>Total Group</th>
<th>Pretest Posttest</th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self Control</th>
<th>Std. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>.685*</td>
<td>.621*</td>
<td>.460*</td>
<td>.718*</td>
<td>.719*</td>
<td></td>
</tr>
<tr>
<td>Assertiveness</td>
<td>.613**</td>
<td>.676**</td>
<td>.474**</td>
<td>.572**</td>
<td>.714**</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>.219</td>
<td>.320*</td>
<td>.501**</td>
<td>.232</td>
<td>.383</td>
<td></td>
</tr>
<tr>
<td>Self Control</td>
<td>.525**</td>
<td>.538**</td>
<td>.506*</td>
<td>.538**</td>
<td>.642**</td>
<td></td>
</tr>
<tr>
<td>Std. Score</td>
<td>.621**</td>
<td>.625**</td>
<td>.554**</td>
<td>.581</td>
<td>.751**</td>
<td></td>
</tr>
</tbody>
</table>

Note.
**Correlation is significant at the 0.01 level (2 tailed)
*Correlation is significant at the 0.05 level (2 tailed)
N= 40
Table 4

SSRS Pretest/Posttest Correlation Secondary Level: Total

<table>
<thead>
<tr>
<th>Group</th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self Control</th>
<th>Std. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest/Posttest</td>
<td>.525</td>
<td>.198</td>
<td>.154</td>
<td>-.398</td>
<td>.395</td>
</tr>
<tr>
<td>Cooperation</td>
<td>.062</td>
<td>.115</td>
<td>-.049</td>
<td>-.552</td>
<td>.061</td>
</tr>
<tr>
<td>Empathy</td>
<td>.458</td>
<td>-.084</td>
<td>.348</td>
<td>-.368</td>
<td>.092</td>
</tr>
<tr>
<td>Self Control</td>
<td>.594</td>
<td>.235</td>
<td>.125</td>
<td>-.381</td>
<td>.484</td>
</tr>
<tr>
<td>Std.Sc.</td>
<td>.428</td>
<td>.290</td>
<td>.196</td>
<td>-.443</td>
<td>.356</td>
</tr>
</tbody>
</table>

N=11

A comparison of mean scores indicates that while mean scores for the individual domains remained similar, what did change from pretest to posttest was the range of scores (See Table 5). For every domain, except Empathy, the range of posttest scores was wider than for pretest scores. It is this change within the range of scores which appears to have had an impact on the students' overall prosocial abilities. At the elementary level the range of scores changed at both
Table 5

Mean Scores for the SSRS Pre and posttests

<table>
<thead>
<tr>
<th></th>
<th>Elementary</th>
<th></th>
<th></th>
<th>Secondary</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=40</td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td>N=11</td>
<td>M</td>
</tr>
<tr>
<td>Coop. Pre.</td>
<td>15.65</td>
<td>2.98</td>
<td>8-19</td>
<td>14.00</td>
<td>2.68</td>
<td>10-18</td>
</tr>
<tr>
<td>Coop. Post</td>
<td>15.75</td>
<td>2.82</td>
<td>10-20</td>
<td>13.64</td>
<td>2.91</td>
<td>10-19</td>
</tr>
<tr>
<td>Asrt. Pre.</td>
<td>14.70</td>
<td>3.20</td>
<td>6-19</td>
<td>11.82</td>
<td>2.48</td>
<td>9-16</td>
</tr>
<tr>
<td>Asrt. Post</td>
<td>13.83</td>
<td>3.04</td>
<td>7-20</td>
<td>13.91</td>
<td>2.39</td>
<td>10-18</td>
</tr>
<tr>
<td>Empathy Pre.</td>
<td>16.63</td>
<td>2.71</td>
<td>10-20</td>
<td>14.18</td>
<td>2.40</td>
<td>10-17</td>
</tr>
<tr>
<td>Empathy Post</td>
<td>16.28</td>
<td>2.74</td>
<td>9-20</td>
<td>14.36</td>
<td>3.50</td>
<td>7-19</td>
</tr>
<tr>
<td>SCPre.</td>
<td>12.03</td>
<td>3.59</td>
<td>5-18</td>
<td>10.46</td>
<td>2.62</td>
<td>7-16</td>
</tr>
<tr>
<td>SC. Post</td>
<td>12.35</td>
<td>3.01</td>
<td>6-20</td>
<td>10.09</td>
<td>2.95</td>
<td>6-17</td>
</tr>
<tr>
<td>SS Pre.</td>
<td>108.28</td>
<td>17.65</td>
<td>66-130</td>
<td>98.36</td>
<td>9.16</td>
<td>85-110</td>
</tr>
<tr>
<td>SS Post</td>
<td>106.48</td>
<td>16.01</td>
<td>68-130</td>
<td>102.00</td>
<td>14.02</td>
<td>80-130</td>
</tr>
</tbody>
</table>

the lower and higher ends which resulted in an overall decline in the standard score from pre to post test. At the secondary level, scores declined at the lower end for only Empathy and Self-Control. However, all domains show an increase in scores at the higher end. As a result, the standard score for the secondary level increased.
Hypothesis Testing

Hypothesis 1

There will be no significant gain in prosocial behaviors for students who participate in the Social Decision Making-Problem Solving program.

T test results comparing the pre and post test Social Skills Rating Scale Standard Scores, a measure of overall prosocial ability, are not significant for either the elementary or secondary levels total group (see Table 6). However, within the separate domains there was a significant difference from pre to post scores for the Assertiveness domain at the elementary level (p<.05). Further, the T test score for Assertiveness approached significance at the secondary level (t= 2.141). While the t test for the elementary level was significant at the .05 level, the mean score for this domain actually declined from pre test to post test (See Table 5). Therefore, the t test represents a significant decline in scores from the pretest to posttest. At the secondary level, however, the mean scores for Assertiveness rose and the t test results indicate a trend towards significant growth in this area.

T tests were conducted for each achievement level as well (see Tables 7a, 7b, 7c). There was a trend towards significant growth in overall prosocial ability for
Table 6

Paired Sample Test: Total Group

**Elementary Level**

<table>
<thead>
<tr>
<th></th>
<th>Mean Difference</th>
<th>Standard Deviation</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>-1.00E-01</td>
<td>2.3072</td>
<td>.274</td>
<td>.785</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>.8750</td>
<td>2.55134</td>
<td>2.202</td>
<td>.034</td>
</tr>
<tr>
<td>Empathy</td>
<td>.3500</td>
<td>2.7226</td>
<td>.813</td>
<td>.421</td>
</tr>
<tr>
<td>Self Control</td>
<td>- .3250</td>
<td>3.2137</td>
<td>.640</td>
<td>.526</td>
</tr>
<tr>
<td>Standard Score</td>
<td>1.8000</td>
<td>11.9876</td>
<td>.950</td>
<td>.348</td>
</tr>
</tbody>
</table>

**Secondary Level**

<table>
<thead>
<tr>
<th></th>
<th>Mean Difference</th>
<th>Standard Deviation</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>.3636</td>
<td>2.7303</td>
<td>.442</td>
<td>.668</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>-2.0909</td>
<td>3.2390</td>
<td>2.141</td>
<td>.058</td>
</tr>
<tr>
<td>Empathy</td>
<td>.1818</td>
<td>3.4876</td>
<td>.173</td>
<td>.866</td>
</tr>
<tr>
<td>Self Control</td>
<td>.3636</td>
<td>4.6319</td>
<td>.269</td>
<td>.800</td>
</tr>
<tr>
<td>Standard Score</td>
<td>-3.6364</td>
<td>13.7497</td>
<td>.877</td>
<td>.401</td>
</tr>
</tbody>
</table>

**Note.**

*N=40

*N=11*
Table 7A

Paired Sample Tests of High Achieving Students

**Elementary Level**

<table>
<thead>
<tr>
<th></th>
<th>Mean Difference</th>
<th>Standard Deviation</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>5.00E-02</td>
<td>1.9050</td>
<td>.117</td>
<td>.908</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>1.3000</td>
<td>1.78003</td>
<td>.266</td>
<td>.004</td>
</tr>
<tr>
<td>Empathy</td>
<td>1.000</td>
<td>2.5752</td>
<td>1.737</td>
<td>.099</td>
</tr>
<tr>
<td>Self Control</td>
<td>-.2500</td>
<td>3.0414</td>
<td>.6801</td>
<td>.717</td>
</tr>
<tr>
<td>Standard Score</td>
<td>3.9500</td>
<td>9.4171</td>
<td>1.876</td>
<td>.076</td>
</tr>
</tbody>
</table>

**Secondary Level**

<table>
<thead>
<tr>
<th></th>
<th>Mean Difference</th>
<th>Standard Deviation</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>2.000</td>
<td>2.4494</td>
<td>1.633</td>
<td>.201</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>-4.50000</td>
<td>1.0000</td>
<td>9.000</td>
<td>.003</td>
</tr>
<tr>
<td>Empathy</td>
<td>-.2500</td>
<td>4.9917</td>
<td>.100</td>
<td>.927</td>
</tr>
<tr>
<td>Self Control</td>
<td>-1.7500</td>
<td>5.6789</td>
<td>.616</td>
<td>.581</td>
</tr>
<tr>
<td>Standard Score</td>
<td>-3.0000</td>
<td>15.6631</td>
<td>.383</td>
<td>.727</td>
</tr>
</tbody>
</table>

**Note.**

\(^a\) N=20  
\(^b\) N=4
<table>
<thead>
<tr>
<th></th>
<th>Mean Difference</th>
<th>Standard Deviation</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>-.3000</td>
<td>2.9458</td>
<td>.322</td>
<td>.755</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>.7000</td>
<td>3.5917</td>
<td>.616</td>
<td>.553</td>
</tr>
<tr>
<td>Empathy</td>
<td>-.9000</td>
<td>2.5144</td>
<td>1.132</td>
<td>.287</td>
</tr>
<tr>
<td>Self Control</td>
<td>-.9000</td>
<td>3.3483</td>
<td>.850</td>
<td>.417</td>
</tr>
<tr>
<td>Standard Score</td>
<td>-1.3000</td>
<td>14.6670</td>
<td>.280</td>
<td>.786</td>
</tr>
</tbody>
</table>

**Note.**  
*N=9*
Table 7C

Paired Sample Tests for Students with Disabilities

<table>
<thead>
<tr>
<th></th>
<th>Elementary Level(^a)</th>
<th></th>
<th>Secondary Level(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Difference</td>
<td>Standard Deviation</td>
<td>T</td>
</tr>
<tr>
<td>Cooperation</td>
<td>-.2000</td>
<td>2.5734</td>
<td>.246</td>
</tr>
<tr>
<td>Empathy</td>
<td>.3000</td>
<td>3.0203</td>
<td>.314</td>
</tr>
<tr>
<td>Self Control</td>
<td>1.000E-01</td>
<td>3.6653</td>
<td>.086</td>
</tr>
<tr>
<td>Standard Score</td>
<td>.6000</td>
<td>14.0649</td>
<td>.135</td>
</tr>
</tbody>
</table>

Note:  
\(^a\) N=10  
\(^b\) N=6

Secondary students with disabilities (t= 2.000). For high achieving elementary pupils and average achieving secondary students there was a trend towards significant growth in the area of Empathy. High average secondary students exhibited a significant change in the area of Assertiveness (p<.001).

The Standard Score is the only standardized score
obtained from the Social Skills Rating System. While the raw scores obtained from the individual domains present information regarding student performance in these individual areas, the standard score is a more valid indicator of a student’s overall functioning level in the area of prosocial ability. While incidents of significance were found for specific domains and achievement levels, significance was not found at either the elementary or secondary level with regards to overall prosocial performance. Therefore, the null hypothesis cannot be rejected.

**Hypothesis 2**

$H_{02}$: Higher achieving pupils will develop significantly higher levels of prosocial skills than their average achieving and disabled peers.

Analyses of the results were obtained using ANOVA. The Social Skills Rating System posttest results served as the dependent variables. Category (High Achieving, Average Achieving, Students with disabilities) served as the independent variables. Significant between groups results were obtained for the elementary level ($p<.05$) (See Table 8). When the Scheffe test of Multiple Comparisons was applied (See table 9) a significant difference was found between the Mean Differences for overall prosocial ability for high achieving students and students with disabilities ($p<0.05$).
Table 8

ANOVA for Standard Score Posttest and Category: Elementary Level

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>995.513</td>
<td>4.599*</td>
<td>.016</td>
</tr>
<tr>
<td>Within Groups</td>
<td>37</td>
<td>216.458</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note.  
N=40
Table 9

Scheffe Test of Multiple Comparisons: Elementary Level

<table>
<thead>
<tr>
<th>(I) Category</th>
<th>(J) Category</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Sig. (I-J)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Achieving Average Ach.</td>
<td>12.4500</td>
<td>5.698</td>
<td>.106</td>
<td></td>
</tr>
<tr>
<td>Disabled</td>
<td>15.4500</td>
<td>5.698</td>
<td>.035</td>
<td></td>
</tr>
</tbody>
</table>

| Average Achieving High Ach. | -12.4500 | 5.698  | .106       |
| Disabled     | 3.000  | 6.580  | .902       |

| Disabled High Ach. | -15.4500 | 5.698  | .035       |
| Average Ach.      | -3.0000 | 6.580  | .902       |

There was no difference between high achieving and average achieving students or average achieving students and students with disabilities.

ANOVA was also applied to the Social Skills Rating System posttest for the secondary level to determine if there was a significant difference in the acquisition of prosocial behaviors at this level. There was no significant difference between the three groups (See Table 10) The Scheffe test could not be applied to the secondary group because one group (Average Achieving) had fewer than two
cases.

Based on these results the null hypothesis may be partially rejected for the elementary level students in that high achieving pupils achieved significantly higher levels of overall prosocial skills than their peers with disabilities. However, the high achieving students did not obtain significantly higher levels of prosocial skills than their average achieving peers, nor did the average achieving peers obtain significantly higher levels of overall social functioning than their peers with disabilities. The null hypothesis may not be rejected with regard to secondary students.

Table 10
ANOVA for Posttest Standard Score and Category: Secondary Level

<table>
<thead>
<tr>
<th></th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td>175.083</td>
<td>.867</td>
<td>.456</td>
</tr>
<tr>
<td>Within groups</td>
<td>8</td>
<td>201.979</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 3

H_{04}: There will be no significant relationship between a student's locus of control and his or her ability to attain
higher levels of social functioning.

Locus of control was compared to both pre and post measures of prosocial ability as measured by the Social Skills Rating System. When Locus of Control was compared to pretest measures for the elementary level students, significant inverse relationships were found to exist between Locus of Control and overall prosocial ability as measured by the SSRS standard score ($r = -.433$, $p < .01$) (See Table 11). This indicates that the more internally oriented elementary students tended to rate themselves higher in terms of overall prosocial ability. Also, there were significant inverse relationships between Locus of Control and cooperation ($r = -.407$), Locus of Control and Self Control ($r = -.403$), and Locus of Control and Assertiveness ($r = -.373$), indicating that elementary students who were more externally oriented rated themselves lower on measures of Cooperation, Assertiveness, and Self Control. When Locus of Control was compared to posttest results for the elementary level, there was not a significant or strong relationship between overall prosocial ability and Locus of Control. There was a low inverse, statistically significant relationship between Locus of Control and Cooperation ($r = -.317$) and Locus of Control and Assertiveness ($r = -.207$) on the posttest. While the relationship between Locus of Control and Self Control was significant at the .01 level.
Table 11

Correlations Between SSRS Scores and Locus of Control: Total Group

<table>
<thead>
<tr>
<th></th>
<th>Locus of Control Elementary Level (N=40)</th>
<th>Locus of Control Secondary Level (N=11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation Pretest</td>
<td>-.407**</td>
<td>-.218</td>
</tr>
<tr>
<td>Cooperation Posttest</td>
<td>-.317*</td>
<td>-.169</td>
</tr>
<tr>
<td>Assertiveness Pretest</td>
<td>-.342*</td>
<td>.319</td>
</tr>
<tr>
<td>Assertiveness Posttest</td>
<td>-.373*</td>
<td>-.533</td>
</tr>
<tr>
<td>Empathy pretest</td>
<td>-.291</td>
<td>-.550</td>
</tr>
<tr>
<td>Empathy posttest</td>
<td>-.013</td>
<td>-.361</td>
</tr>
<tr>
<td>Self control Pretest</td>
<td>-.403**</td>
<td>.137</td>
</tr>
<tr>
<td>Self control Posttest</td>
<td>-.207</td>
<td>-.184</td>
</tr>
<tr>
<td>Standard Score Pretest</td>
<td>-.433**</td>
<td>-.240</td>
</tr>
<tr>
<td>Standard Score Posttest</td>
<td>-.270</td>
<td>-.299</td>
</tr>
</tbody>
</table>

Note.  
**Correlation significant at the 0.01 level (2-tailed)  
*Correlation is significant at the 0.05 level (2-tailed)

at the time of pre testing, the relationship was only moderately strong (r=-.403). After participation in the social decision making and problem solving program, there was little to no relationship between Locus of Control and Self Control (r=-.207). Empathy was the one area of social development that did not have a strong relationship with
Locus of Control at either time of pre or post testing.

Locus of control did not relate significantly to overall prosocial development for either the pre or posttest at the secondary level. When comparing Locus of Control to the different domains of social skills development, no significant relationships were found. However, there were areas of moderately strong relationships. When compared to pretest results, Locus of Control and Empathy show a moderately strong inverse relationship (r = -.550) indicating that the more externally oriented a secondary student is, the lower their rating in the area of empathy. When comparing posttest results, Assertiveness and Locus of Control show a moderate inverse relationship (r = -.533) indicating that the more externally oriented the student is the lower that student's rating in the area of Assertiveness.

These results indicate that there is not a significant relationship between Locus of Control and the attainment of prosocial abilities. At the elementary level, a significant relationship was found to exist at the time of pretest. However, upon post testing, the relationship between Locus of Control and overall prosocial ability was no longer significant. Further, locus of control and overall social ability was not found to be significant when comparing pretest or posttest results for the secondary level. The
only consistent significant relationships were found in the areas of Cooperation and Assertiveness and only for the elementary level. Therefore the null hypothesis cannot be rejected.

**Hypothesis 4**

$H_04$: There will be no significant relationship between a student’s level of self-concept and his or her ability to attain higher levels of social functioning.

The self concept indexes of Self Image, Academic Self Confidence, Social Self-Confidence and the Self-Confidence Composite score for the Student Self-Concept Scale were compared to the Social Skills Rating System posttest domain and standard scores. There is a moderate, significant relationship between the self-confidence composite scores and the SSRS Standard Score at the elementary level ($r=.612$, $p<.01$) (See Table 12). This would indicate that at the elementary level, there is a significant relationship between a student’s level of self-concept and the ability to attain higher levels of prosocial behaviors. An analysis of the individual social skill domain scores and the various self-concept index scores indicate several areas of significant relationships. Cooperation correlated significantly with all areas of self-concept. Cooperation and Self-Image show a low positive relationship ($r=.388$, $p<.05$), while Cooperation correlated at a moderately
Table 12

Correlations between SSRS Posttest Scores and Self-Concept (SSCS)

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self Control</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self Image</strong></td>
<td>.388*</td>
<td>.286</td>
<td>-.132</td>
<td>.094</td>
<td>.223</td>
</tr>
<tr>
<td><strong>Academic SC</strong></td>
<td>.656**</td>
<td>.667**</td>
<td>.139</td>
<td>.627**</td>
<td>.671**</td>
</tr>
<tr>
<td><strong>Social SC</strong></td>
<td>.683**</td>
<td>.648**</td>
<td>.165</td>
<td>.546**</td>
<td>.647**</td>
</tr>
<tr>
<td><strong>SC Composite</strong></td>
<td>.668**</td>
<td>.653**</td>
<td>.069</td>
<td>.505**</td>
<td>.612**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Secondary Level</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self Image</strong></td>
<td>-.062</td>
<td>.006</td>
<td>-.152</td>
<td>.343</td>
<td>-.093</td>
</tr>
<tr>
<td><strong>Academic SC</strong></td>
<td>.536</td>
<td>.381</td>
<td>-.179</td>
<td>.768**</td>
<td>.429</td>
</tr>
<tr>
<td><strong>Social SC</strong></td>
<td>.093</td>
<td>-.176</td>
<td>-.186</td>
<td>.247</td>
<td>.097</td>
</tr>
<tr>
<td><strong>SC Composite</strong></td>
<td>.314</td>
<td>.144</td>
<td>-.237</td>
<td>.708*</td>
<td>.164</td>
</tr>
</tbody>
</table>

**Note.**

**Correlation significant at the 0.01 level (2-tailed)**
*Correlation significant at the 0.05 level (2-tailed)
*N=40  
*N=11

significant level with all other areas of student self-concept (p<.01). Assertiveness, Self Control and the Standard Score did not correlate significantly with Self-Image, but all correlated at a moderate level (p<.01) with all other areas of the student self-concept. Empathy did not correlate with any indices of the student self-concept.

Analyzing results by achievement category indicates
differences across categories at the elementary level. The following relationships were found for high achieving students. (See Table 13A) There was a significant relationship between a student’s self-confidence composite score and that student’s overall prosocial ability ($r = .482$, $p < .05$). Overall prosocial ability also correlated significantly with Academic Self-Confidence ($r = .581$, $p < .01$), and Self-Confidence ($r = .532$, $p < .05$). Cooperation was found to correlate significantly with Academic Self-Confidence ($r = .619$, $p < .01$), Social Self-Confidence ($r = .489$, $p < .05$), and the Self-Confidence Composite Score ($r = .570$, $p < .01$). Self-Control correlated significantly with Academic Self-Confidence ($r = .558$, $p < .05$). Empathy did not correlate with student self-confidence for the high achieving students nor did Self-Image correlate significantly with any area of measured prosocial ability.

Average achieving elementary level students show two areas of significant correlation; Cooperation and Social Self-Confidence ($r = .759$, $p < .05$), and Assertiveness and overall self-confidence ($r = .715$, $p < .05$) (See Table 13B).

Students with disabilities show significant relationships ($p < .05$) in several areas (See Table 13C). Cooperation correlated with Academic Self-Confidence ($r = .640$), Social Self-Confidence ($r = .764$), and overall the self-confidence composite score ($r = .648$) at a moderate level.
Table 13A

Correlations between SSRS Posttest Scores and Self-Concept (SSCS):

High Achieving Students

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self Control</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Image</td>
<td>.331</td>
<td>.055</td>
<td>-.074</td>
<td>-.050</td>
<td>.139</td>
</tr>
<tr>
<td>Academic SC</td>
<td>.619**</td>
<td>.430</td>
<td>.401</td>
<td>.558*</td>
<td>.581*</td>
</tr>
<tr>
<td>Social SC</td>
<td>.489*</td>
<td>.501*</td>
<td>.369</td>
<td>.361</td>
<td>.532*</td>
</tr>
<tr>
<td>SC Composite</td>
<td>.570**</td>
<td>.383*</td>
<td>.252</td>
<td>.303</td>
<td>.482*</td>
</tr>
</tbody>
</table>

Secondary Level

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self Control</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Image</td>
<td>.597</td>
<td>.661</td>
<td>-.288</td>
<td>.827</td>
<td>.966</td>
</tr>
<tr>
<td>Academic SC</td>
<td>.557</td>
<td>.843</td>
<td>-.271</td>
<td>.885</td>
<td>.398</td>
</tr>
<tr>
<td>Social SC</td>
<td>-.642</td>
<td>.299</td>
<td>-.990**</td>
<td>-.217</td>
<td>-.767</td>
</tr>
<tr>
<td>SC Composite</td>
<td>.408</td>
<td>.697</td>
<td>-.471</td>
<td>.781</td>
<td>.238</td>
</tr>
</tbody>
</table>

Note.
**Correlation significant at the 0.01 level (2-tailed)
*Correlation significant at the 0.05 level (2-tailed)
*a N=20
b N=4

Academic Self-Confidence also correlated with Assertiveness (r=.667) and overall prosocial ability (r=.662). Social Self-Confidence also correlated with both of these same areas (Assertiveness: r=.687, Standard Score: R=.641).

At the secondary level, there is no significant relationship between a student’s overall self-confidence
and that student’s overall prosocial abilities for the total group (See Table 12). Academic Self-Confidence and Self Control showed a high positive, significant relationship ($r = .786, p < .01$) and the Self-Confidence Composite and Self Control exhibited a less significant, moderate relationship ($r = .708, p < .05$).

For high achieving secondary students there was only one area of a significant correlation and that was an inverse relationship between Empathy and Social Self-Confidence ($r = -.990, p < .01$) (See Table 13A). This would indicate that students who rated themselves high in the area of empathy, rated themselves low in the area of social self-confidence. While Empathy did not show a significant correlation with any other area of self-concept, it tended to correlate inversely with all of the self-concept indices. Cooperation correlated at a moderate, but insignificant level with Social Self-Confidence ($r = -.642$).

For the secondary level students with disabilities there was only one area of significant correlation at the secondary level. Social Self-Confidence and Self-Control correlated at a high positive level ($r = .861, p < .05$) (See Table 13C). This would indicate that for students with disabilities who rated themselves high in the area of self control, they also rated themselves high in the area of social self-confidence.
Table 13B

Correlations between SSRS Posttest Scores and Self-Concept
(SSCS): Average Achieving Students

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self Control</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Image</td>
<td>.135</td>
<td>.541</td>
<td>-.214</td>
<td>.141</td>
<td>.316</td>
</tr>
<tr>
<td>Academic SC</td>
<td>.510</td>
<td>.620</td>
<td>-.512</td>
<td>.345</td>
<td>.422</td>
</tr>
<tr>
<td>Social SC</td>
<td>.759*</td>
<td>.542</td>
<td>-.302</td>
<td>.572</td>
<td>.521</td>
</tr>
<tr>
<td>SC Composite</td>
<td>.603</td>
<td>.715*</td>
<td>-.428</td>
<td>.459</td>
<td>.532</td>
</tr>
</tbody>
</table>

Note
*Correlation significant at the 0.05 level (2-Tailed)
*N=10

The Student Self-Concept Scale is comprised of the subscale standard scores of the Self-Image, Academic and Social subscales. As this score is a total of all scores, this is a better indicator of a student’s overall self-confidence. There is a significant relationships between overall student self-concept and overall prosocial ability for the elementary level (p<.01), but not at the secondary level. Therefore, the null hypothesis may be rejected for elementary level pupils, but not for secondary level students.
Table 13C

Correlations between SSRS Posttest Scores and Self-Concept (SSCS): Students with Disabilities

Elementary Level

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self Control</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Image</td>
<td>.293</td>
<td>.207</td>
<td>-.337</td>
<td>-.176</td>
<td>-.012</td>
</tr>
<tr>
<td>Academic SC</td>
<td>.640*</td>
<td>.667*</td>
<td>.107</td>
<td>.496</td>
<td>.662*</td>
</tr>
<tr>
<td>Social SC</td>
<td>.764*</td>
<td>.687*</td>
<td>.080</td>
<td>.445</td>
<td>.641*</td>
</tr>
<tr>
<td>SC Composite</td>
<td>.648*</td>
<td>.595</td>
<td>-.051</td>
<td>.299</td>
<td>.498</td>
</tr>
</tbody>
</table>

Secondary Level

<table>
<thead>
<tr>
<th></th>
<th>Cooperation</th>
<th>Assertiveness</th>
<th>Empathy</th>
<th>Self Control</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Image</td>
<td>-.346</td>
<td>-.157</td>
<td>.037</td>
<td>.109</td>
<td>-.476</td>
</tr>
<tr>
<td>Academic SC</td>
<td>.132</td>
<td>-.153</td>
<td>-.340</td>
<td>.382</td>
<td>.132</td>
</tr>
<tr>
<td>Social SC</td>
<td>.135</td>
<td>-.692</td>
<td>.176</td>
<td>.861*</td>
<td>-.216</td>
</tr>
<tr>
<td>SC Composite</td>
<td>-.128</td>
<td>-.482</td>
<td>-.26</td>
<td>.590</td>
<td>-.385</td>
</tr>
</tbody>
</table>

Note.
*Correlation significant at the 0.05 level (2-Tailed)
*aN=10
*bN=6

Hypothesis 5

H₀₅: For students with disabilities, there will be no significant relationship between intelligence and the attainment of social skills.

The SSRS posttest scores were compared to IQ scores which were obtained from the WISC-III (See Table 14). No
Table 14
Correlations between IQ and SSRS Posttest Scores

<table>
<thead>
<tr>
<th></th>
<th>IQ Elementary</th>
<th>IQ Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>.541</td>
<td>-.756</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>.014</td>
<td>.866</td>
</tr>
<tr>
<td>Empathy</td>
<td>.380</td>
<td>-.500</td>
</tr>
<tr>
<td>Self Control</td>
<td>-.105</td>
<td>-.866</td>
</tr>
<tr>
<td>Standard Score</td>
<td>.068</td>
<td>-.655</td>
</tr>
</tbody>
</table>

significant relationships were found for either the elementary level or secondary level. There was a moderate relationship found between Cooperation and IQ at the elementary level. While there were no statistically significant relationships found at the secondary level, there were several strong relationships. Assertiveness correlated with IQ at a high positive level (r=.866) indicating that students who rated themselves high in the area of assertiveness tended to have higher IQ’s. There was also an inverse high relationship between Cooperation and IQ (r=-.756) and Self-Control (r=-.866) indicating that as students rated themselves high in these areas, their IQ tended to be at the lower end. Moderate inverse correlations were found between Empathy (r=-.500) and the Standard Score (r=-.655).
Since statistically significant relationships were not found between IQ and SSRS scores, the null hypothesis cannot be rejected.

**Summary**

The Social Skills Rating System was administered to students in grades three through eight as a pre and posttest measure to determine if the Social Decision Making-Problem Solving program promoted the development of prosocial behaviors. The independent variables of student achievement levels (High Achieving, Average Achieving, Students with Disabilities), self-concept, and locus of control were compared to the social skills scores to determine if these variables have any impact on student ability to acquire prosocial behaviors.

In general the overall prosocial skills and the various domain areas of social skills tended to relate significantly at the elementary level, but not at the secondary level. This was true when comparing pretest, posttest, and pre/post test results. However, this may not be a positive finding when comparing pre and posttest results in that this indicates that the elementary level students tended to rate themselves similarly on both the pre and post test scales. Therefore, not much change from pre to post test was evidenced. For the secondary level, there was little to no relationship in overall prosocial abilities from pretest to
post test (r= .290). There was a moderate relationship between the cooperation pre and posttest scores indicating students tended to rate themselves similarly in this area of prosocial development. There was a low inverse relationship in the area of Self-Control (r= -.381). This would suggest that students who tended to rate themselves high in this area at the time of the pretest, rated themselves differently at the time of the posttest. There was little to no relationship between the Assertiveness pretests and posttests and a low positive relationship in the area of Empathy for the secondary level.

No significant gains in prosocial behaviors were found in the acquisition of overall prosocial abilities. However, significant gains were made in the area of Assertiveness at the elementary level and there was a trend towards significant change in this area at the secondary level. When the different achievement categories were compared, at the elementary level, the high achieving students did significantly out perform their peers with disabilities, but not their average achieving peers. There were no significant findings with regards to achievement level for the secondary pupils. At the elementary level, locus of control correlated significantly with overall prosocial ability at the time of pretesting, but not upon post testing. While prior to participating in the social decision making and
problem solving program, students who were more externally oriented tended to have lower overall prosocial ability, after participating in the program, this relationship was no longer significant. Overall student self-confidence correlated significantly at the elementary level with overall prosocial ability, but not at the secondary level. There was no relationship between IQ of pupils with disabilities and overall prosocial ability.

In conclusion, results indicate that while no significant growth was seen from pre to post testing for the total group, there were areas of significance for the elementary students. Secondary student results were not as significant, but indicate a trend towards significance in several areas. This lack of significance for the secondary level could be the result of sample size for this group as "(...) small sample size effectively reduces power and may make it very difficult to achieve statistical significance even at the .05 level" (Newton & Rudestam, 1999).
Chapter V
Conclusions and Recommendations

Restatement of the Problem

In an effort to be in compliance with the Individuals with Disabilities Act (IDEA) and specifically the least restrictive environment clause of this law, movements such as Inclusive education and the Regular Education Initiative have focused on educating students with disabilities within the regular education setting. One of the main reasons for educating students with disabilities within a regular education setting is to improve their prosocial abilities. However, research (Gresham, 1981, Coie and Keoppl, 1990) indicates that the development of prosocial skills has generally not been addressed within the regular education setting and that students with disabilities do not acquire these skills just by being in regular education. Walker, Schwarz, Nippold, Irvin, and Noell (1994) stress the need for the direct teaching of these skills within the regular education setting. The manner in which these skills should be taught has not been clearly defined.

One proposed method of addressing the development of prosocial behaviors is through the teaching of social decision making and problem solving. This study sought to determine if the teaching of social decision making and problem solving would improve prosocial abilities in
students with disabilities. Recognizing that as Bandura (1986) and Jackson (1987) indicate, the acquisition of prosocial behaviors is a complex process, this study investigated the interaction or effect of other variables such as locus of control, self concept, and intelligence on the acquisition of prosocial behaviors, not only for students with disabilities, but for all students. The empirical focus of this study was on the effect between participation in the Social Decision Making and Problem Solving program (Elias and Clabby, 1997) and the acquisition of prosocial behaviors. The research questions investigated (a) whether there would be a significant gain in prosocial behaviors for students who have participated in the Social Decision Making-Problem Solving program, (b) if higher achieving students develop significantly higher levels of prosocial skills than their average achieving and disabled peers, (c) if there a significant relationship between a student’s locus of control and his or her ability to attain higher levels of social functioning, (d) if there is a significant relationship between a student’s level of self concept and his or her ability to attain higher levels of social functioning, and (e) for students with disabilities, is there a significant relationship between intelligence and the attainment of social skills?
Discussion

The research design was primarily a correlational study intended to determine if there was a relationship between the participation in the Social Decision Making and Problem Solving Program and the development of prosocial skills. The literature consistently indicates that students with disabilities exhibit less proficiency in this area than their nondisabled peers exhibited. However, much of the research in this area compares these two populations in a general setting. That is to say, many of the studies do not offer interventions, but look at the differences in these two groups.

This study sought to determine, if after intervention, students with disabilities could in fact acquire social skills. Prosocial development was measured at the beginning phase of the Social Decision Making and Problem Solving readiness level, and then after a four month period of instruction. Topics covered in grades Kindergarten through fourth included self control skills such as listening carefully, keeping calm, presenting yourself in appropriate ways, coping with hassles, learning to role play, and choosing friends. For students in grades five through eight skills taught included "Speaker Power," how to identify and take charge of trigger situations, how to communicate appropriately and assertively, identifying with put downs,
and how to give positive feedback to peers. Formal
instruction took place once each week in language arts
class. Students who would normally be in the Resource Center
during this time, returned to the mainstream to take part in
these lessons with their nondisabled peers. Resource Center
teachers were available to assist or co-teach with the
regular education teacher.

Additionally, this study sought to determine if there
was a relationship between the independent variables of
locus of control, self-concept, and for students with
disabilities, intelligence and the acquisition of prosocial
behaviors.

In general there was not a significant change in overall
prosocial skills development as a result of participating in
the Social Decision Making-Problem Solving program. For the
total elementary sample, mean overall social skill scores
declined and there was a significant decline in the area of
Assertiveness. Further analysis indicates that the higher
achieving students did demonstrate significant gains in
prosocial skills over their peers with disabilities, but not
their average achieving peers. Nor did the average achieving
peers exhibit significant growth over their peers with
disabilities. One possible explanation for this decline in
mean scores for the overall prosocial skills scores for the
younger students could be that the students over rated
themselves at the time of pre-testing. Once the students began to participate in the program, they became better acquainted with the skills and were better able to rate their performance at the time of the posttest. This would support Smetana and Bennett’s theory (1993) that younger children acquire rules of morality before acquiring social rules. Therefore, once instruction in specific social skills areas were taught, the children were then better able to assess their skills in these areas.

For the secondary students, there was a trend towards improvement in overall prosocial ability. Specifically, there was a trend towards significant growth in the area of Assertiveness for this age level. One possible explanation for this trend towards growth in the area of Assertiveness could be due to the topics covered in the curriculum. Many of the lessons covered during this four month period focused on teaching students to be more assertive. These lessons included teaching how to identify “trigger” situations and how to “take charge” of these types of situations, assertive communication skills, how to provide constructive feedback to their peers, and how to make and keep friends.

Secondary level students with disabilities also demonstrated a trend towards modest growth in their overall prosocial abilities, while their high achieving peers exhibited minimal growth in their overall prosocial
abilities. Secondary students with disabilities exhibited growth from a mean standard score of 97.17 to 105.17 while their high achieving peers grew from a mean overall score of 98.5 to 101.5. While this change was not found to be significant, this does indicate a change in a positive direction. Lack of significance at this level could be due to the smallness of the sample size for this age level. As Newton and Rudestam (1999) indicate, it is difficult to obtain statistical significance with small sample sizes. In their research Walker, et.al.(1994) that cognitive problem solving based interventions generally did not improve prosocial behaviors. While these results are inconclusive, they do show a trend towards improvement in specific areas of social skills and would tend to dispute their findings.

With regard to the elementary level students, a significant relationship was found to exist between locus of control and social skills performance at the time of pretesting. In general participants who rated themselves high in their prosocial functioning, tended to be more internal than those who rated themselves lower on the social skills scales. However, at the time of post testing, there was no longer a significant or strong relationship between locus of control and the level of social functioning for the total sampling group. Detailed analysis indicates that the strongest relationship existed between locus of control and
the social skills pretest for the high achieving elementary students \( r = -0.432 \). Whereas, the relationship between these two variables and either elementary students with disabilities or average achieving students was within the low range \( r = -0.256 \) for average achieving pupils, \( r = -0.249 \) for students with disabilities). Analysis of the correlations for the average achieving students reveals that the relationship between locus of control and prosocial skills acquisition increased from a little to no relationship at the time of the pretest to a moderate inverse relationship at the time of the posttest. This would indicate that at the time of pretesting, average achieving students who were more internally oriented rated themselves lower in the area of overall prosocial development. After participation in the program, those same average achieving students rated themselves higher in the area of prosocial behaviors. While Nowicki and Strickland (1973) found that locus of control has been strongly correlated with academic achievement and social development this study did not find this same relationship to exist with regards to social skills development.

There was not a significant relationship between these two variables at the secondary level for either the pre or posttest. As with the elementary group, the strongest relationship was found to exist for the high achieving group
(r = -.868 for the pretest, r = -.839 for the posttest). This is a strong relationship and may be considered to be substantively significant but was not found to be significantly significant. This indicates that high achieving students tended to be more internally oriented and scored themselves high in terms of their overall social skills development for both the pre and post test measures.

One possible limitation to these findings could be due to the administration of the locus of control measure. Other researchers (Dupper & Krishef, 1993; Spence & Spence 1979) conducted research investigating the effects of social skills training on locus of control and used the locus of control scale as the pre- and post measure. Both studies found intervention to have a short term effect on locus of control in that participants moved from an external orientation to a more internal orientation. Since the intent of this current study was to determine if locus of control would enhance or interfere with one's ability to acquire social skills, the locus of control measure was administered once. However, it was administered towards the end of the program, after the students may have already begun to change in their orientation as a result of the intervention. Even so, the results correlated more strongly with pre-test results than with posttest results. This could indicate that participation in a decision making and problem solving
program does have an impact on the acquisition of social skills irregardless of orientation.

A comparison of self-concept and students' self ratings on the Social Skills Rating System was examined. Indexes of self concept, self image, academic self concept, and Social Self Concept, as well as the overall self concept composite were compared to student overall total performance on the Social Skills Rating System and the four domain areas of cooperation, assertiveness, empathy, and self control. Overall findings show a significant relationship between overall social skills ratings and student self concept composite scores for elementary students. This indicates that students who rated themselves high in the areas of social development also rated themselves high in areas of self-concept. Overall findings were not significant at the secondary level, nor was there a trend towards a significant relationship. However, at the secondary level, self control was found to correlate significantly with academic self concept \(r=0.768, p<0.01\) and the self concept composite \(r=0.708, p<0.05\).

Further analysis indicates that for the elementary group, the high achieving students show stronger relationships among not only their overall self concept and social development, but also within the self concept indexes and domains of social skills. One of the more interesting
findings is that while high achieving students show significant correlations between self concept indexes and social skills domains, there is little to no relationship between self image and assertiveness, empathy and self control. When analyzing the elementary average achieving students and elementary students with disabilities, the average achieving students show only two areas of significant relationships; social self concept and cooperation and overall self concept and assertiveness. While there was no significant relationship between overall social skills development and overall self concept for elementary students with disabilities, there were many strong relationships between social skill domain and self concept indexes. There were moderately strong relationships between academic and social self concept with the social skills areas of cooperation, assertiveness and overall social skills development.

These findings tended to support the literature (Goleman 1995, Gresham, MacMillan, & Bocian, 1996, Elias & Clabby, 1997) which found that the acquisition of social skills was not related to intellectual functioning. Examination of these findings show that for the elementary students with disabilities there is little to no relationship between IQ level and overall prosocial functioning (R=.068). However, for the secondary students there is a moderately strong
inverse relationship \((R=-.655)\). One problem with this particular comparison is the exceptionally small number of pupils. There were only 16 total students with disabilities included in this study. Splitting the groups into elementary and secondary levels decreased sample sizes. While there were a total of 6 secondary students with disabilities, IQ’s for only three of the 6 were obtained due to the nature of the disabilities. Therefore, it is difficult to draw any conclusions regarding these findings.

**Conclusions and Recommendations for Future Studies**

The purpose of this study was to determine if participation in the Social Decision Making and Problem Solving program would have a positive impact on the acquisition of prosocial skills for students with disabilities. This study also sought to determine if the independent variables of self-concept, locus of control, and intelligence had an effect on the ability to acquire these skills. One of the major limitations to this study was the sample size. It was hoped that information gotten through this study would help in developing and implementing programs for the purpose of improving prosocial development for students with and without disabilities.

While there were a total of 51 participants, when broken into grade level and achievement level groups, achieving statistical significance was difficult. Therefore, future
research should include a larger sample size. Future research may also want to consider sampling a specific disability category as there is evidence (Durrant, 1995, Tarnowski & May, 1989) to suggest that students with differing disabilities perform differently on measures of academic and social competence. By investigating specific disability categories, research may begin to better determine what types of social skills training programs work better with the different populations.

The use of student self reports may also be perceived as a limitation in that student self reports tend to be viewed as less favorable as these instruments are open to bias and are generally poorly designed (Gresham & Elliot, 1989). The Social Skills Rating System (Gresham & Elliot, 1990) was selected because of its design. The student self rating scales of this measure correlate strongly with both the teacher rating and parent rating scales and was found to be a highly reliable measure. Considering these two limitations, there were many positive trends found in this study which may be interpreted as substantively significant.

Throughout all of the hypotheses testing, there was a consistent difference between elementary and secondary students. While the elementary students demonstrated a decline in scores from the pretest to the posttest, this may be viewed as a positive change. As noted above, younger
students tend to be more involved in learning moral rules of society and generally have limited social experiences with those within their age group. By participating in this program, they were better able to determine what social skills were and then were better able to assess their performance for the posttest. Even though there was a decline in scores, these findings suggest a possible increase in awareness in this area. Future research should look towards increasing the time between pre and post testing. At the least, the pre and post time should be increased to one school year with the pretest completed during September and the posttest during June. Ideally, a longitudinal study carried out over several years may yield significant data regarding this program and its effectiveness in improving prosocial behaviors. Trainers of this program indicate that it takes between five to seven years for this program to become a part of the overall school culture and suggest that teacher training be carried out over two to three years. Therefore, it would seem that data collection should follow this same time table.

For secondary students, while findings were not significant, there was a strong trend towards significant improvement, particularly for student with disabilities. These findings support some of the previous research conducted on middle school students (Dupper & Krishef, 1993)
which found that cognitively oriented, problem solving training with middle school aged behavior disordered boys showed positive effects. However, this study found the effects to be short term and disappeared shortly after intervention stopped. Elias and Clabby (1991) found that middle school students who participated in a program for at least two years showed generalization up to ten years after participation. Differences in these two studies include that the research conducted with the students with behavior disorders was conducted in isolation and not in a regular education setting. This current research as well as that of Elias and Clabby was conducted within the regular education setting. This further supports the need to include students with disabilities in regular education as this does appear to have a positive and longer lasting effect on the acquisition of prosocial behavior than programs that work with only the disabled student.

In terms of locus of control, a significant relationship between locus of control and the acquisition of prosocial skills was not found to exist. While there is much research regarding the relationship between locus of control and academic achievement, there is little research with regards to locus of control and the ability to acquire social skills. Further, research tends to compare the differences between nondisabled peers and peers with disabilities, their
orientation and their academic achievement levels. No research was found which sought to determine if a student’s locus of control orientation would inhibit or enhance ability to acquire prosocial skills. This study tends to support the theory that locus of control, while related to prosocial ability prior to intervention, does not appear to be related to one’s ability to acquire prosocial skills. However, further research is warranted to validate this claim.

Self-Concept was strongly related to the acquisition of social skills for elementary students, but not for secondary students. An interesting finding at the elementary level was that self-concept correlated more strongly with prosocial skills for the high achieving students and students with disabilities. Whereas, there were little to no relationships between the self-concept indices and social skills domains for the average achieving students. Again, research cited tended to compare levels of self-concept among students of differing academic achievement and disability levels and did not investigate the relationship between self concept and the ability to learn social skills. These findings tend to support the theory that self concept is related to achievement, whether it be for academic or social skills, for elementary students. However, these findings do not find this to be true for secondary level students. Therefore,
further investigation is needed in this area to determine the importance of self concept in the acquisition of prosocial behaviors and to try to determine why at the elementary level self concept correlates strongly with high average and disabled students, but not for average achieving students.

One area that this study did not control for and which warrants further investigation is the area of teacher attitude, specifically for regular education teachers who are responsible for instructing students with disabilities in the regular education setting. deBettencourt (1999) found that a negative attitude towards mainstreaming still exists on the part of regular education teachers. Other research (Feldman, 1983) found that teachers set expectations for students based upon their perceived competence of particular students and that these perceptions can have a negative effect upon learning. Therefore, future research in this area should consider investigating the attitude and expectations that regular education teachers have regarding students with disabilities and their ability to acquire prosocial behaviors.

Practical Applications

Even though statistically, results were not significant overall, the results do lend positive support for addressing the teaching of prosocial skills within the regular
education setting. In addition, as this program demonstrated a trend towards growth for the various achievement levels, it would suggest that all students would benefit from such a program. This particular school district was small so that this program could be implemented in all grades at the same time. However, this may not be practical in larger districts. Therefore, larger school districts may begin by targeting specific grade levels. As the original research conducted by Elias et al. (1991) showed long term positive results with Middle School students and as these are the students who will be put into situation where they will need to make good social decisions sooner than their younger school mates, this may be the age level to target first. Then depending upon the district’s need the program can be carried down year after year until all grades have been incorporated. One important part of this program’s success is that all staff including administrators, guidance counselors and teachers should be trained so that this becomes a part of the school culture.

Conclusion

These findings continue to illustrate the complexities involved with the acquisition of prosocial behaviors. The purpose of the study was to determine if students with disabilities could acquire prosocial skills by participating in the Social Decision Making and Problem Solving program...
offered within the regular education classroom. While results were not statistically significant, they do support the need to address these skills in regular education settings. Further, while significant differences were found in the level of functioning between high achieving students and students with disabilities, no differences were found between students with disabilities and their average achieving peers with regard to overall prosocial ability. Therefore, by bringing social skills training into the regular education classroom, all students should benefit. Further, it appears that programs need not be overly concerned with regards to students’ locus of control or intelligence level. However, at the elementary level, programs should be sensitive to student levels of self-concept and include activities that would help to build student self-concept. Elias and Clabby, however, might argue that their program does help to promote self confidence in that it provides students with the tools to be social problem solvers as well as assertive in their interactions with others. Future research may seek to address this issue specifically by using a self-concept scale as a pre and post measure.

Research to date has been limited. Studies have generally explored social skills training for students with disabilities in isolated settings. Studies regarding locus
of control and self concept have compared these variables across categories of students and have made generalizations with regards to academic achievement, but not much has been studied in terms of the interaction of these variables with the ability to acquire prosocial behaviors. Very few studies have incorporated a student self assessment. In an effort to validate these findings, new research may include both a student and teacher rating component in order to better determine program effectiveness. Limitations have been noted in this current study. Nonetheless, it is significant in that it is one of only a few studies which have begun to investigate the effectiveness of cognitively oriented, problem solving type programs in helping to improve social skills in not only children with disabilities, but all students included in regular education. The need to address social development in all students, not only those with disabilities is supported by the research of Berg (1982) who found an overlap between students with disabilities and students without. As the including of students with disabilities continues to grow, teachers will need assistance in helping these students to assimilate both academically and socially. The Social Decision Making and Problem Solving program shows promise in fostering effective inclusion. It is hoped that this study will contribute to a better understanding of those personality factors which
assist students in acquiring prosocial behaviors for both theoretical and practical considerations.
References


Appendix A

Parental Consent Form
Laura Russomano, Ed.S.
34 McKinley Avenue
West Caldwell, New Jersey 07006

Dear

I am an Ed.D. candidate at Seton Hall University in Administration and Supervision. I will be conducting a study at your school and am requesting your consent to include your child in this study.

The study is being conducted to determine the effectiveness of the Social Problem Solving and Decision Making Program which your child is currently receiving in school. This study will also measure the factors of locus of control, self confidence, and intelligence and how these factors may help or hinder a student’s ability to progress in this program. The purpose of this study is to be able to provide important information to the teaching staff regarding the learning styles of their students so that instruction in social problem solving and decision making will be enhanced. Once parental permission has been obtained, a group of students will be selected randomly to participate in the study. The study will consist of the administration of two scales. The Children’s Nowicki-Strickland Internal-External Locus of Control is a 40 item "Yes-No" response test which measures whether a student is internally or externally motivated. The Student Self Confidence Scale is a student self report which assess a
student's level of self confidence for the areas of academics, social, and self image. The completion of these instruments should take approximately 35 to 45 minutes and will be completed at school during the school day. Information regarding your child's level of social competence will be obtained from assessments conducted by the classroom teachers. Information regarding intellectual levels for some of the students will be obtained from files located within the Child Study team office.

Participation is voluntary and refusal to participate will not involve any loss of services or benefits to your child. I assure you that your child's right to privacy and confidentiality will be fully protected. Your child's name will not show on any records or paperwork related to this study, and individual results will not be discussed with anyone. The group results of the study will be made available to you in a form determined to be appropriate by Mrs. Benfatti, superintendent of schools.

I sincerely hope that you consider this request and allow your child to participate in this study. Should you have any questions or concerns regarding this study, you may contact me directly at (973) 839-1300 ext.13.
Please review this information carefully and if you agree to have your child participate, read the following Parental Consent form, sign where designated, and return in the enclosed stamped, self-addressed envelope. Also attached is a copy of the assent form to be signed by your child at the time that I will administer the two scales, should your child be selected for this study.

Sincerely,

Laura Russomano, Ed.S.
Parental Consent for Child to Participate in Study

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject’s privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number at the Office is (973) 378-9809.

I have read the material above, and any questions I asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I may withdraw without prejudice at any time.

_____________________________   ________________________
Subject or Authorized Representative   Date
Appendix B

Student Assent Form
Explanation of the Study to the Students

"I am a student at Seton Hall University and I am studying to learn more about your Social Problem Solving and Decision Making Program. I am trying to find out what types of things help students like yourself to do well in this program so that I may be able to help other students who are having difficulty with the program.

I have asked your parents if it would be all right for you to answer some questions for me and to include you in this study and they said 'yes.' I am going to ask you some questions and I would like you to answer these as honestly and carefully as you can.

If at any time, you change your mind and would not like to take part in this study, tell me and we will stop.

This is not a test for school and will not go on your report card. There are no right or wrong answers, only how you feel about the questions that I ask. The tests should take about 35 to 45 minutes to complete. If you should have a question during the testing, please try to wait until you are finished and I will answer your questions at that time. If you have any questions now, before we start, please ask me so that we may talk about these now and so I may be able to clarify anything for you before you begin."
If you agree with what I have told you and would like to be part of the study, please sign here and date it. Thank you.”

Assent Form

Mrs. Russomano has explained to me that she is studying about our Social Problem Solving and Decision Making Program and is trying to find why some students do very well in the program and why some students have difficulty. I agree to participate in this study, and I understand that I can change my mind at any time without any penalty.

__________________________    _________________________
Student’s Signature            Date