School counselors' use of the combination social stories™ and video modeling intervention for social skills development of students diagnosed with Autism Spectrum Disorders: a qualitative criticism of the perceptions of multidisciplinary team members

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SCHOOL COUNSELORS’ USE OF THE COMBINATION SOCIAL STORIES™ AND VIDEO MODELING INTERVENTION FOR SOCIAL SKILLS DEVELOPMENT OF STUDENTS DIAGNOSED WITH AUTISM SPECTRUM DISORDERS: A QUALITATIVE CRITICISM OF THE PERCEPTIONS OF MULTIDISCIPLINARY TEAM MEMBERS

by

Dawnette Leigh Cigrand

An Abstract

Of a thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Education (Counselor Education and Supervision) in the Graduate College of The University of Iowa

May 2012

Thesis Supervisors: Professor Nicholas Colangelo Associate Professor Tarrell Awe Agahe Portman
ABSTRACT

Autism Disorder and related disorders such as Asperger’s Syndrome and Pervasive Developmental Disorder, Not Otherwise Specified, are collectively known as Autism Spectrum Disorders (ASD). These disorders are currently the fastest growing diagnosed disorders among children and have been found in 110 in 10,000 individuals. Individuals with ASD are delayed in social development according to diagnostic criteria. To address the social development delays of students with ASD, two research-based interventions have been developed: Social Stories™ and video modeling. Social Stories™ uses a specific combination of sentences to describe a social situation or a social skill in story form. Video modeling is an isolation of social skill steps delivered through a video medium to model the social skill.

The purpose of this study was to combine Social Stories™ and video modeling (combined intervention) and investigate the perceptions of educational multidisciplinary team members (school counselors, parents, teachers) regarding the combination intervention for the development of social behavior in students with ASD. School counselors participating in this study delivered the combination Social Stories™ and video modeling intervention to student participants with ASD. Then, the perceptions of the school-based multidisciplinary team members were collected through qualitative questionnaires. These multidisciplinary team members’ perceptions were used in analysis of the combination intervention to develop the Qualitative Criticism.

This Qualitative Criticism describes, interprets, and evaluates the pragmatic use of the combination of the Social Stories™ and video modeling intervention with students with ASD in schools from the perspectives of the school counselors, teachers, and parents of these students. Organized by case, team members of each of the student participants reflected on the strengths and weaknesses of these interventions for that student. Across cases, comments were analyzed by role (i.e., parent, teacher, school counselor). Then, these roles were combined into a cross-case analysis of multidisciplinary team
perspectives of the usefulness of these interventions for students with ASD. Pre-test and post-test data were collected using teachers’ responses to the Vineland II Teacher Rating Form (V-II TRF) to triangulate findings grounded in the qualitative data.

Findings suggested that parents, teachers, and school counselors supported the use of these interventions for several reasons. The combination intervention increased opportunities for repetition of the target skills; for visual learning through written words in stories, cartoons, and videos; and for individualization to meet the varying needs and interests of students with ASD. The intervention was also developmentally appropriate, engaging, and fun for students. In addition, when the school counselor collaborated with parents and teachers through the intervention, the parents and teachers seemed to be more knowledgeable about the intervention, and supported these students to use the intervention and generalize the target skills. While V-II TRF scores did not show statistically significant gains to confirm the multidisciplinary team members’ support for the combination intervention, clinical significance was found in the domain scores of Communication and Daily Living, and in the Composite score measuring overall adaptive functioning.

Abstract Approved:

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Title and Department

Date

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PH.D. THESIS

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“I think about how I want to be right here, where I am right now” – Brinkman.

My dissertation process has not been easy. Nobody’s is. Kiara Brinkman’s quote from a novel written from the perspective of a child with autism helped me. It was my mantra to remind me that I was blessed to be at every “right now” through the dissertation process, and to appreciate all of the “right nows” as difficult as they seemed at the time. I think of the “nows” that I have come and gone through as I wrote this thesis, all of the times that I will truly miss because of all of the special people who shared those moments with me, and who have helped me to get to this “now.”

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CHAPTER I
INTRODUCTION
You have got to keep autistic children engaged with the world. You cannot let them tune out.

Dr. Temple Grandin, Professor and Autism Self-Advocate

Temple Grandin, diagnosed with Autistic Disorder at the age of 3, is now a world-renowned speaker, writer, and professor, and was recently listed in Time Magazine as one of the 100 most influential people in the world (Hauser, 2010). In her writings (Grandin & Barron, 2005; Grandin & Duffy, 2008) and speaking appearances (TED Conferences LLC, 2010), Grandin explains how individuals with autism spectrum disorders think differently and struggle socially, but through appropriate intervention and positive support can achieve and integrate into the world successfully. Grandin’s success may be attributed to two things: 1) her mother, who Grandin notes did not allow her to be institutionalized, but rather continually sought out ways to engage her daughter in society, and 2) the multitude of frustrated parents, teachers, counselors and researchers who in this time in history are trying to support individuals they know who have an autism spectrum disorder, and yearn for the personal insight Grandin can potentially offer them about individuals on the autism spectrum. This yearning to support individuals with autism as their prevalence increases in schools is what drives this dissertation study. Grandin’s own story can serve as a challenge to parents and professionals to not only find ways to have a positive impact on students diagnosed with autism spectrum disorders, but also to establish best practices so that individuals with autism spectrum disorders can achieve their potential.

Pervasive Developmental Disorders (PDD) are described as developmental disabilities characterized by a triad of impairment (Brown, 2004). The triad includes developmental delays in communication and social interactions, as well as repeated stereotyped routines or behaviors (American Psychiatric Association [APA], Diagnostic
Currently the DSM-IV-TR groups the following disorders under Pervasive Developmental Disorders: Autistic Disorder (AD), Asperger’s Syndrome (AS), Pervasive Developmental Disorder, Not Otherwise Specified (PDD-NOS), Rhett’s Disorder, and Childhood Disintegrative Disorder, all of which are usually diagnosed in childhood (American Psychiatric Association). Mental health professionals commonly refer to three of these disorders (i.e., AD, AS, PDD-NOS) as Autism Spectrum Disorders (ASD) (United States Department of Health and Human Services, 2005) (see Appendix A). AD, AS, and PDD-NOS make up the “spectrum” of disorders because the range of symptoms is broad and the severity of symptoms varies widely among the ASD population. Autism Spectrum Disorders or ASD will be the terms used to refer collectively to these three disorders throughout this study. Other terms that will be referred to throughout this thesis are detailed in the Definition of Key Terms that follows at the end of this chapter.

**Prevalence Rates of Autism Spectrum Disorders**

Less than two decades ago, ASDs were considered rare disorders (AutismFACTS, 2006). Children born between the years of 1975 and 1979 were diagnosed with an ASD at a prevalence rate of 4 per 10,000 individuals (.04%) (AutismFACTS). Now, the number of children diagnosed with ASD has increased dramatically. The Center for Disease Control (2009) released the prevalence estimate for ASD at an average of 1 per 110 individuals (.09%) in the United States. Another study reported an estimate of 110 in 10,000 children (1.1%) to have been diagnosed with one of the disorders on the autism spectrum (Kogan et al., 2009). According to the American Psychological Association (2009), ASD diagnoses have risen a remarkable 1342% since 1993, making them one of the fastest growing diagnosed developmental disorders or disabilities of children that may qualify for special education in schools.

Some researchers argue that this increase in prevalence is indicative of broadened diagnostic criteria for these disorders and a heightened awareness of the disorders in
medical communities and the public domain (Bello, 2007). This is a valid point, especially with empirical evidence that shows previous diagnoses such as mental retardation (Bello) and personality disorders (Fitzgerald, 2002) have been modified to ASD diagnoses after a change in the diagnostic criteria. Yet, one would suspect that such an increase in awareness of the disorders would eventually reach a point of saturation in the medical profession and statistics of prevalence of the disorder would consequently reach a plateau, or would “level out”. Rather, the number of individuals diagnosed with ASD continues to climb (Centers for Disease Control, 2008). Research institutes, such as The M.I.N.D. Institute, the Centers for Disease Control, the Institute of Medicine, and the National Institutes of Health maintain that the dramatic change in the autism prevalence rates suggests a clear increase in the number of individuals who have one of these disorders. The findings of these institutions seems to dispel the theories that changes in diagnostic criteria or increased familiarity with the criteria among medical and mental health professionals has caused autism to be identified more often (AutismFACTS, 2006). In other words, these institutions are suggesting there are factors other than an increase in awareness that are responsible for the increase in prevalence, although identification of these factors is still being researched. The increased incidence of individuals with the disorder is both remarkable and disturbing, and this conundrum has pushed academia to put the research of ASD to the forefront, forcing counselors, teachers and parents to take a closer look at how to adequately treat and educate this population of children.

**Education of Children with Autism**

When ASD prevalence rates were much lower, students diagnosed with an ASD were typically educated in specialized settings such as mental health facilities, residential facilities or special education facilities like the League School (Fenichel, 1974). Some educators of the time argued for day schooling rather than residential facilities so children would remain in touch with their parents, but these educators noted that the severity of
the disorders could dictate the removal of the child from the home. Often, students
diagnosed with ASD were excluded from regular education settings and were labeled
uneducable. Specialists in ASD like Rutter (1970) believed many students with ASD
were educable, but he admitted that they knew little about appropriate educational
methods for these individuals, and thereby focused empirical research on further
understanding the disorders to guide educational methodology for this population.

Since the 1970s, education in the United States as it applies to all students with
disabilities including students with ASD has evolved dramatically due to legislative
mandates and litigation in the court system. The law currently guarantees all students a
free and appropriate public education in the least restrictive environment (Education for
All Handicapped Children Act, 1977; the Individuals with Disabilities Act [IDEA], 1984;
and the Individuals with Disabilities Improvement Act [IDEIA], 2004). The least
restrictive environment is the learning setting in which a student can succeed while being
integrated with his or her peers when possible with supports such as supplementary aids
and services based on the individual student’s needs (Bartlett, Weisenstein, & Etscheidt,
2002). Therefore, the IDEIA gives children with disabilities such as students with ASD
the right to a public education, special education and related services. Section 504 of the
Rehabilitation Act of 1973 and the American with Disabilities Act (ADA, 1990)
broadened the scope of rights for individuals with disabilities by guaranteeing basic civil
rights in the workplace, higher education and other public arenas.

The Individuals with Disabilities Act (IDEA, 1984), the reauthorization of the
Individuals with Disabilities Act (IDEA, 1990), and Individuals with Disabilities
Education Improvement Act (IDEIA, 2004), stipulate that the rights of students with
disabilities are met in educational settings with the least amount of restriction of
placement, and with opportunities for parents to be thoroughly involved with the
educational decision-making process in regard to their own children. Alternate settings,
such as special education classes or treatment facilities, should only be considered when
regular education settings are not appropriate due to disruption of that educational environment or particular educational needs of the disabled student in these environments prevents placement therein (Bartlett et al., 2002). Thus, these regular educational school placements, called inclusive settings in which students with disabilities are with their peers, need to be tried before considering more segregated educational programs (Greer v. Rome City School District, 1992; Oberti v. Board of Education, 1992) such as special education programs that require Individualized Education Plans (IEPs) for students.

Before placement in alternative settings can be considered, educators must demonstrate that a student has not been successful with regular interventions in the classroom. Decisions about which interventions to use and for how long to use them for students who are having difficulty in school are generally made by these multidisciplinary teams, which typically consist of parents, teachers, counselors, administrators and specialists such as school psychologists, speech and language therapists, occupational therapists, physical therapists and special education consultants (Bartlett et al., 2002). These teams determine which interventions are used, when different interventions are needed, if the frequency, intensity or duration of the intervention needs modification, or if formal assessment should be considered. This may be a difficult process, and at times, there is disagreement within multidisciplinary teams as to which services or interventions should be used (Bitterman et al., 2008).

When multidisciplinary teams come to a consensus on which services and interventions should be used, they are implemented and the student is monitored for progress. Data are collected on these interventions to determine if a student exhibits a response to intervention (RTI). According to Sugai and Horner (2009), RTI has six defining features multidisciplinary teams can use as guidelines:

1. Interventions that are supported by scientifically based research.
2. Interventions that are organized along a tiered continuum that increases in intensity (e.g., frequency, duration, individualization, specialized supports, etc.).


5. Emphasis on assessing and ensuring implementation integrity.

6. Regular and systematic screening for early identification of students whose performance is not responsive to instruction. (p. 226)

So, data-based decision rules to assess progress need to be established before the intervention is put in place (when possible) and data are collected, so the multidisciplinary team has a clear process of evaluating the student while the intervention is being implemented.

As the school-based multidisciplinary team, teachers, parents, counselors, school psychologists, and administration meet periodically to monitor the student’s progress and their RTI. After analyzing several factors, the multidisciplinary team may determine further intervention is necessary when a student is not adequately responding to interventions. This decision may include determination of eligibility for special education services; if so, these multidisciplinary teams may add the responsibility of determining the student’s Individualized Education Plan (IEP). By law, when the team develops the IEP, the multidisciplinary team must be comprised of parents/guardians, a classroom teacher, a special education teacher, an administrator or designee, and a person trained in assessment interpretation such as a school psychologist or a school counselor, and the student when appropriate (Bartlett et al., 2002; IDEIA, 2004). These multidisciplinary IEP teams generate the IEPs, which delineate student-specific goals based on a student’s developmental levels. IEPs also include curricular and instructional planning, such as selection of particular interventions or methods, to work toward achievement of the student’s goals. These goals include specialized education service goals, which differ from the standards and benchmarks used in regular education. Even though students are
identified as needing special education and have an IEP for support, the setting in which the goals of the IEP occur may still be the general education setting as long as supplementary aids and services are in place to help the student make adequate progress toward the goals of the IEP (Bartlett).

All students who have significant difficulty meeting educational standards and benchmarks are expected to go through the multidisciplinary team process. This typically includes students diagnosed with ASD. Because the continuum of abilities and severity of symptoms within the autism spectrum varies greatly, the needs of students on the spectrum also vary greatly. Subsequently, the multidisciplinary teams/IEP teams within a school district need to be able to be responsive to these students by matching them with classroom experiences and interventions that are aligned with their specific needs and strengths. This is not a simple task. In a review of interventions for children with ASD, Dawson and Osterling (1997) found many interventions had positive outcomes; however, not all children responded equally well to any one intervention. Therefore, multidisciplinary teams need to be deliberate in their choice of interventions for each student who is presented before them.

Multidisciplinary teams also are expected to make decisions about the best educational settings for students on the spectrum. Students with ASD are now served in regular school settings throughout the country with and without IEPs. More and more students on the autism spectrum are being served in traditional classrooms or gifted programs due to IDEIA (2004), Section 504 of the Rehabilitation Act (1973), and educational practices such as differentiation of instruction and Universal Design Curricula Development (United States Department of Education, 2005). Many students with ASD – over 140,000 – are also currently being served through public schools’ special education programs (United States Department of Education), so these students are not served as often in specialized public settings such as treatment or mental health facilities as they were a few decades ago. Many students on the spectrum are looking at
post-secondary options, and preparing for college (VanBergeijk, Klin, & Volkmar, 2008). Members of the multidisciplinary team and IEP teams who make these decisions for or with students diagnosed with ASD need to critically consider all of these options to make the best choices for students on the spectrum.

**Statement of the Problem**

Although the rights and inclusion of students with disabilities have improved markedly since the early 1970s, the prevalence rates of individuals with ASD were still relatively low at that time (i.e., sixteen studies showed rates varying from 3.3 to 16.0 per 10,000 children; Wing, 1993). ASD were not disabilities many people were aware of, so these disabilities were not disconcerting to most of society because the diagnosis was used so infrequently. As the prevalence rates have risen markedly since the 1980’s, more people have become aware of these diagnoses, and are acting to support individuals diagnosed with ASD. Medical and mental health professionals as well as educators have been elicited to provide research on these disabilities and to offer services to support individuals with the disorders.

Now, educators have been asked to modify their educational practices to meet these students’ needs. The law on educating students with disabilities in inclusive settings preceded outcome research on evidence-based practices for individuals with ASD (Heflin & Simpson, 1998; Rutter, 1970). Therefore, investigations of research-based educational practices are still being conducted for this population. In the meantime, educational teams are burdened with trying to choose research-based interventions for these students, which are both effective and feasible in the school setting. In addition to trying to choose which intervention to use to meet the needs of these students, the questions of how it should be delivered, and by whom also needs to be determined. This challenge requires professional organizations to take a position on best practices.

The American School Counseling Association (ASCA) has stated that school counselors are responsible for helping all students succeed in the academic, career and
personal/social domains (ASCA, 2004, 2005). ASCA (2010) has also published a position statement directing school counselors to support “all students realize their potential, and make adequate yearly progress regardless of challenges resulting from disabilities and other special needs.” Implied in this charge are students with autism spectrum disorders, who do have intense challenges. However, educational research literature describing appropriate interventions for school counselors working with students with disabilities is scarce. Specifically, current empirical literature on the school counselor and interventions for students with ASD is almost non-existent. Two recent articles in the Professional School Counselor (Gibbons & Goins, 2008) and the Journal of School Counseling (Moorhead, Green, McQuistion, & Ozimek, 2008) focused on the school counselor’s work with students on the autism spectrum. These two articles include a conceptual piece on the role of the school counselor with a student with Asperger’s Syndrome (Gibbons & Goins) and a single case study (Moorhead et al.). Other than these two articles, research specifically guiding school counselors in their work with this population has not been conducted or published.

Entire journals are devoted to professions that sometimes overlap with the school counseling profession. For example, Autism and Focus on Autism and Other Developmental Disabilities (Sage Journals Online) journals have a recommended audience of teachers and caregivers, while the Journal of Autism and Developmental Disorders (Springer Publications) is devoted to school and child psychologists. Therefore, there is sufficient empirical research for practitioners in related fields suggesting specific interventions for this population of children. School counselors are rarely mentioned in these journals. As service providers in schools, school counselors can adapt and modify treatment recommendations from these related fields to use in their school counseling practice. Even so, the school counseling field is distinctive and practicing counselors need to explore what interventions work and are practical to use with the ASD population within their school counseling curricula and programs. As
members of multidisciplinary teams and IEP teams, school counselors also need to be aware of their systemic impact on educational interventions with students with ASD. Other important considerations about school-based school counseling interventions include their utility within the school system as well as how the interventions can be used to meet the needs of a particular population such as students diagnosed with ASD.

School counselors are expected to support the academic, career and personal/social development of all students in schools. School counselors have had graduate training in social development and differentiated interventions for individuals with special needs (Council for Accreditation of Counseling and Related Educational Programs [CACREP], 3.a, 3.e, 2009). Significant difficulty or impairment in social development is one of the defining characteristics of ASD (American Psychiatric Association, 2000), so intense treatment is needed for individuals with ASD to reach developmental goals (Autism Society of America, 2009). Therefore, school counselors who are knowledgeable of social development may be able to aid in the treatment of students with ASD by providing social skills interventions in the school setting. The perceptions of the multidisciplinary team about delivery of the intervention by a school counselor to a student with autism needs to be explored; in addition, team members’ perspectives on the utility of particular interventions for the ASD population is not currently in the research literature.

Rationale for the Study

Several interventions have shown effectiveness for improving social relations with students with ASD (Rogers, 2000). One of these interventions, called Social Stories™ (Gray, 1994), has been shown to improve social skills in children with ASD (Chan, 2008; Ozdemir, Universiti, Egitim, Ozel, & Bolumu, 2008; Scattone, Tingstrom, & Wilczynski, 2006). Video modeling has also been an effective intervention with the ASD population in clinical settings (Bellini, Akullian, & Hopf, 2007; Charlop & Milstein, 1989; Nikopoulos & Keenan, 2004, Rogers, 2000). In addition, the combination
of these interventions (Scattone, 2008) has been found to be effective in a single case study, but has not been examined further. So, the purpose of this study was to investigate the perceptions of educational multidisciplinary team members (school counselors, parents, teachers) regarding the combination Social Stories™ and video modeling intervention, for the development of social behavior in students with ASD. An important consideration of this study is that the intervention is being delivered in the school setting by a school counselor, rather than a clinical setting.

A Qualitative Criticism (QC) investigative lens was utilized to analyze the information gained from the adult participants. QC is the method that was chosen because it allowed the researcher to identify the perceived strengths and weaknesses of the combination intervention from key members of the multidisciplinary team. Also, QC allowed for incorporation of the data from the Vineland-II Teacher Rating form (V-II TRF) into the study to determine if acquisition of social skills development of the student with ASD occurred. The data from the V-II TRF were used to assess the combination intervention, and to support or conflict with the perceptions of the multidisciplinary team members.

In addition to analyzing the perspectives of multidisciplinary team members in this study, understanding the effects of social skills interventions on the ASD population in natural settings such as schools is crucial. The need for social skills development for this population is clear. How educators can have an effect on social skills development of students with ASD in the natural setting of the school has not been explored. In schools, the inclusion movement has placed students with ASD in regular classrooms much more often than in previous years (United States Department of Education, 2005). To gain the most benefit from these inclusive settings, students with ASD must be able to use social skills to interact with other students so that these students can learn from each other. The United States Department of Education finds this initiative so important that they have recently funded the State University of New York in Buffalo over one million dollars to
research social skills interventions for high functioning elementary students with ASD (Institute of Education Sciences, 2008). The Autism Society of America (2009) also suggests that educational planning for students on the spectrum should include social skills development. To meet the educational needs of these students, schools are obligated to provide effective research-based interventions for students with ASD. While these interventions have been shown to have a strong research base, determination of the utility of providing these interventions for this population in natural settings such as schools is still needed.

To ensure the applicability of this study to school settings, these social skills interventions will be conducted in the school setting by a school counselor. Many studies on Social Stories™ and video modeling have been conducted; however, most of them have been completed in clinical settings rather than natural settings (Bellini, Akullian, & Hopf, 2007; Nikopoulos & Keenan, 2004; Scattone, 2007). Further, researchers rather than practitioners have implemented the previous interventions. Authors of these previous studies are careful to say that limitations of their findings are the conditions under which the studies were performed (i.e., clinical settings, carried out by researchers). Because researchers may have different knowledge and skill sets, it is difficult to know if the same conclusions would result if practitioners, such as school counselors, delivered the interventions. It only makes sense that school counselors, who are identified as specialists in the social development of children and adolescents, deliver the social skills interventions because of their educational background and training in it.

The setting wherein the study is conducted may also impact the results. Since school counselors are the practitioners delivering the interventions in schools in this study, the results may be more indicative of the practicality of these interventions in their intended setting, and may lead to recommendations for the counselors’ role with this population of students.
Another reason this study is important is it examines a unique treatment combination. Many studies of interventions for students with ASD have been conducted and analyzed for their effectiveness. Several studies of video modeling have shown positive outcomes for students with ASD (Bellini, et al., 2007, Nikopoulos & Keenan, 2004). Many studies of Gray’s Social Stories™ (1994) also have been carried out, showing positive outcomes with the ASD population (Scattone, Tingstrom, & Wilczynski, 2006; Swaggert, Gagnon, Bock, Earles, Quinn, & Myles, 1995). Recently, one single-subject study combined video modeling with Social Stories™, which led to improved conversational skills in a boy with autism (Scattone, 2008). Therefore, this study continued to explore this treatment combination and the perceived effects it had on students with ASD in developing social skills in school settings.

**Purpose of the Study**

The purpose of this study was to investigate the perceptions of educational multidisciplinary team members (school counselors, parents, teachers) of the Social Stories™ and video modeling combination intervention, for the development of social behavior in students with Autism Spectrum Disorders (ASD). All school counselors attended a one-day training focused on working with students with autism spectrum disorders using Social Stories™ and video modeling interventions (Scattone, 2008) in their comprehensive school counseling programs. Each trained school counselor delivered the combination intervention to student participants diagnosed with ASD in the participant’s school setting over the course of a semester. For a comprehensive picture of the experiences of each student, data on each student were collected in two ways. First, teachers of the student were asked to complete the Vineland II Teacher Rating scale (V-II TRF) about the student two times: once before the intervention began, and then again after the intervention was completed. Second, qualitative data were also collected from the school counselors, teachers, and parents to gather their views of the strengths and weaknesses of these interventions with these particular students through questionnaires.
This study adds to previous research by analyzing the perspectives of key members of the multidisciplinary teams who typically determine which interventions are used with students with ASD. The perspectives of these team members in decision-making positions regarding the combination Social Stories™ and video modeling intervention is crucial to establish if this research-based intervention can transform into best practice.

**Research Questions**

The following research questions will guide the study and methods of investigation:

1. How does the combination Social Stories™ and video modeling intervention meet the needs of students diagnosed with Autism Spectrum Disorders in schools?
2. How does the combination Social Stories™ and video modeling intervention have the potential to meet the needs of students diagnosed with Autism Spectrum Disorders in schools?
3. What are the strengths and weaknesses of the Social Stories™ intervention for meeting the needs of students with ASD?
4. What are the strengths and weaknesses of the video modeling intervention for meeting the needs of students with ASD?
5. What are the strengths and weaknesses of combining the Social Stories™ and video modeling interventions for meeting the needs of students with ASD?
6. How can the combination intervention be used by school counselors in their comprehensive school counseling programs?
7. How has the combination intervention affected the social behavior of students diagnosed with Autism Spectrum Disorders?

**Overview of Research Methods**
In this study, multidisciplinary team members have been asked to answer these questions and share their perceptions of utilizing the Social Stories™ and video modeling, combination intervention with students with autism spectrum disorders in schools. Qualitative Criticism was the research method selected for use in this study to explore the multidisciplinary team members’ perceptions on the aforementioned research questions. Qualitative Criticism (QC; Swartz, 1993) combines criticism with qualitative research to analyze an event in context by using the experience of critics within that context to describe and evaluate the event. Eisner (1985) defines criticism as an extension of connoisseurship in which a public statement is made to evaluate or interpret using a combination of knowledge, appreciation, and perception. To gather public statements about the social skills intervention for students with ASD, the multidisciplinary team members were considered the experienced critics. So, the school counselors, teachers, and parents as members of each student’s multidisciplinary team, were asked to respond to questionnaires about the intervention.

The responses to the questionnaires were then organized by case to evaluate the intervention as it related to each student case. Each case, or unit of analysis, consisted of the responses about the intervention from the school counselor, teacher, and parents of each student subject. To examine the public statements made on the questionnaires about the social skills intervention, a constant comparison method was used to identify theories grounded in the data within each case (Glaser & Strauss, 1967). Then, the comments were analyzed across the multiple case studies to identify patterns or differences by the role of each critic (i.e., school counselor, teacher, parent) and across the cases in the cross case synthesis.

The emergent theories relating to the needs of students with autism, and the strengths and limitations of the interventions will be used to critique the intervention in the Discussion chapter. These critiques make up the Qualitative Criticism. Qualitative Criticism was chosen because it allows for the researcher to both describe and appraise
the interventions in the context of real-life cases. This quality is important in this study because each case is inherently unique based on the differences in school settings, school counseling programs, parent involvement, and student strengths and needs. Simply, this method allows for consideration of the idiosyncrasies of the student participants with ASD who vary greatly in their presenting concerns and abilities. In addition, this method of exploration allows the interventions to be critiqued based on the particular context surrounding each case.

With each case, school counselors, teachers, and parents as multidisciplinary team members have a united purpose to help students succeed in schools. As mentioned earlier, though, members of multidisciplinary teams do not always agree on the reasons for choosing an intervention. The characteristics of an intervention that might be important to some members of the multidisciplinary team may not be as important to other members. So, finding common or disparate issues surrounding multidisciplinary team members’ critiques of this intervention may lead to important conversations and research about how to meet student needs from various points-of-view. Also, finding the themes that bring the multidisciplinary team together may be important to identify so members of multidisciplinary teams can work together effectively. One theory behind Qualitative Criticism is the idea of solidarity (Swartz, 1993). Qualitative Criticism creates an opportunity for exploration of how each team member contributes to the solidarity of the multidisciplinary team by identifying what team members support or reject about this intervention. In addition, perspectives of team members and their respective counterparts will be examined across the multiple cases to identify themes by member role (e.g., teachers in all of the cases). Thus, examination of perceptions of the multidisciplinary team as a whole and individual members within it allows for a pragmatic evaluation that defines our expectations for school-based interventions for student needs, and gives credence to this study.

Limitations to the Study
There are several limitations to this study. One significant limitation is the delivery of the intervention. School counselors were trained to deliver the Social Stories™ and video modeling combination intervention, but retained the freedom to use their professional judgment in the provision of these interventions to best meet the needs of the student subjects within their comprehensive school counseling programs. Therefore, the frequency of the delivery of the interventions and the specific way the interventions were combined has not been recorded, nor has the intervention been monitored for integrity of delivery. In addition, their respective school counselors tailored the interventions to meet the socially developing needs of each student subject. This was allowed because each of the student subjects had been diagnosed with an autism spectrum disorder, and so, vary significantly in intellectual ability, adaptive functioning, and previously learned skills. Therefore, each student subject in the study had his own set of social skill goals, typically determined by the student’s multidisciplinary team. Thus, this researcher did not measure individual progress toward these specific goals. Instead, the participants’ overall social and adaptive functioning was assessed using the scores from the V-II TRF before and after the interventions.

Other limitations of the study include typical limitations associated with working with human subjects. While Vismara and colleagues (2009) found that a brief intervention such as these interventions could be effective with the ASD population, counselors or student subjects could have exhibited fatigue effects over the semester, which may have affected the outcomes of the study. Evidence of these effects were apparent when three counselors elected to withdraw from the study because of a variety of factors affecting school counselors, including client caseload, crisis management responsibilities, and commitment to the study. These same factors may have had an effect on the counselors’ who completed the study and their ability to deliver the interventions with integrity. The student subjects also had a variety of presenting concerns such as difficulty developing relationships with others and difficulty with change related to their
diagnoses, which may have had an impact on their social behavior development. Details
about these issues are discussed in Chapter IV.

In using qualitative questionnaires, the researcher relies on the participants to be
truthful and forthcoming about their experiences. Subsequently, the recommendations
that are made about these interventions by the adult participants may not be completely
accurate or may be biased in some way. Teachers who will be completing the assessment
measure may also have biases about the counselor, the student, or the study, which may
impact the results positively or negatively. In addition, because these are case studies,
they are context specific to each student, school, and time in history, so they are not
generalizable to the general population but rather can be generalized to a broader theory
using analytical generalization (Yin, 2009).

**Definition of Key Terms**

*Asperger’s Syndrome:* Asperger’s Syndrome (AS) is a developmental disorder
with diagnostic criteria similar to Autistic Disorder including delays in social
development and stereotypic or repetitive behaviors. The primary difference between AS
and AD is the absence of clinically significant delays in early language in those
diagnosed with AS (e.g., single words are used by age 2, communicative phrases are used
by age 3) (DSM-IV-TR, 2000). Language that is present may be unusual in terms of the
individual's preoccupation with specific subjects and apparent verbosity. Communication
difficulties include failure to use conventional rules of conversation and social
interaction, failure to pick up nonverbal cues, difficulty with understanding figures of
speech, and limited ability to self-monitor.

*Autistic Disorder:* Autistic Disorder (AD) is a developmental disorder
characterized by impaired social interactions, communication problems, and repetitive
behaviors. Symptoms usually appear before the age of three (see DSM-IV-TR, 2000, for
diagnostic criteria). The exact cause of autism is not known, however, it is likely
influenced by genetics. AD is one in a group of related developmental disorders called autism spectrum disorders (National Human Genome Research Institute, 2009).

*Autism Spectrum Disorders*: The term Autism Spectrum Disorders (ASD) is used to describe a cluster of disorders typically incorporating Autism Disorder (AD), Asperger’s Syndrome (AS), and Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS) into one group. Individuals diagnosed with an Autism Spectrum Disorder (ASD) show variation in intellectual ability and severity of developmental deficits (Gillberg & Coleman, 2000). Autism Spectrum Disorders generally display the triad of impairment, which includes developmental delays in social skills/relations, speech and language skill deficits, and the presence of stereotyped behavior, interests, or activities.

*Combination Intervention*: The combination intervention in this study refers to the use of the Social Stories™ and video modeling interventions (see below for a in-depth description of each of these interventions) together to remediate or enhance a social skill. To combine the two interventions, Social Stories™ and video modeling could be used in the same session, in back-to-back sessions, or in another method of alternation. The school counselors in this study were given this creative freedom to combine the interventions to meet the particular needs of the student, to be sensitive to rest of the student’s comprehensive educational program, and to be conducive to the typical time constraints of the school counselor.

*Individuals with Disabilities Act*: The Individual with Disabilities Act (IDEA) is federal legislation “ensuring services to children with disabilities throughout the nation. IDEA governs how states and public agencies provide early intervention, special education and related services to more than 6.5 million eligible infants, toddlers, children, and youth with disabilities” (United States Department of Education, 2008).

*Individualized Education Plan*: Individualized Education Plans (IEPs) are a provision of IDEA that mandates individualized goals, curriculum, supplementary aids,
and related services in the least restrictive environment for a child with an identified
disability (Bartlett, Weisenstein, & Etscheidt, 2002).

**Neurotypicals**: Individuals who have not been diagnosed with a neurological-
based disorder such as an autism spectrum disorder.

**Pervasive Developmental Disorders**: Pervasive Developmental Disorders (PDD)
are psychological disorders “characterized by severe and pervasive impairment in several
areas of development: reciprocal social interaction skills, communication skills, or the
presence of stereotyped behavior, interests, and activities. The qualitative impairments
that define these conditions are distinctly deviant relative to the individual's
developmental level or mental age” (American Psychological Association, 2000).

**Pervasive Developmental Disorder – Not Otherwise Specified**: Pervasive
Developmental Disorder – Not Otherwise Specified (PDD-NOS) is a diagnosis that
“should be used when there is a severe and pervasive impairment in the development of
reciprocal social interaction associated with impairment in either verbal or nonverbal
communication skills or with the presence of stereotyped behavior, interests, and
activities, but the criteria are not met for a specific Pervasive Developmental Disorder,
Schizophrenia, Schizotypal Personality Disorder, or Avoidant Personality Disorder”
(American Psychiatric Association, 2000).

**Section 504**: A federal law from the Rehabilitation Act of 1973 designed to
protect the rights of individuals with disabilities in programs and activities that receive
federal funds from the U.S. Department of Education.

**Social Stories™**: A written script that “describes a situation, skill, or concept
according to ten defining criteria. These criteria guide the story development to ensure an
overall patient and supportive quality, a format, a ‘voice’ and relevant content that is
descriptive, meaningful, and physically, socially and emotional safe for the audience”
that can be used with individuals with ASD or other disabilities (Gray, 2009, p. 13). The
ten criteria for Social Stories™ include: 1) one goal of sharing information; 2) a two-step
discovery process of gathering information to gain understanding and identify topics to explore through the Stories; 3) three parts including a title and introduction, body and conclusion; 4) a “fourmat” that is meaningful to the audience possibly including text and/or illustration; 5) five factors of avoiding use of 2nd person, a positive tone, past, present or future tense, literally accurate, and accurate meaning; 6) six questions that should address the “wh’s” or “how” questions; 7) seven sentence types (descriptive, perspective, coaching from the parent, professional or peer, affirmative and partial sentences); 8) a formula using a 2:1 ratio of descriptive, perspective and affirmative sentences to coaching sentences; 9) a Story that is meaningful to the audience; and 10) caring guidelines for editing and implementation (Gray, 2009).

*Video modeling:* A procedure in which a model of a given behavior is presented to an individual through a video medium so that an individual or subject will also perform or mimic that particular behavior after watching the video once or repeatedly (adapted from Martin & Pear’s [2003] definition of modeling). There are three basic types of video modeling: video modeling, video self-modeling and point-of-view video modeling (Bellini & Akullian, 2007; Bellini, Akullian & Hopf, 2007). In video modeling, typically instructors or peers make a video depicting the skill to be learned. In video self-modeling, the subject or actor in the video is the individual working on the skill. Point-of-view video modeling uses specific camera angles so that the video of the activity is made to look like the skill is being performed from the perspective of the individual for which the video is created.

**Summary**

This study extends previous research on the combination Social Stories™ and video modeling intervention by looking at the pragmatic use of them in schools by school counselors to develop the social skills of students diagnosed with ASD. This qualitative study used Qualitative Criticism and Multiple Case Study strategies to gather the perspectives of individual members of multidisciplinary teams to identify strengths and
weaknesses of these interventions by case and across cases by identified roles of the school counselors, teachers, and parents. This QC will then describe and appraise the usefulness of these interventions in schools from these multiple perspectives.
CHAPTER II
LITERATURE REVIEW

Autism Spectrum Disorders (ASD) have traditionally been fascinating yet challenging disorders for researchers, helping professionals, and the general public alike. One author writes, “After many hours with my eyes buried in loads of literature on autism, I was able to make one important conclusion to begin with -- the study of autism still remains one of the most difficult developmental disabilities to understand” (Marchionne, 1982, p. 3). Despite our interest, and the volumes of research and writing that has been completed on these disorders, they continue to challenge human’s understanding of them. This literature review synthesizes some of what is known about these disorders, including the history of these disorders, and current understanding of ASD, such as the defining features of ASD and the effectiveness of social skills interventions for these disorders. In addition, this literature review provides an overview of social skills development in individuals with ASD (Wing, 1991), and a detailed summary of research previously conducted on the Social Stories™ (Gray, 1994) and video modeling as “stand alone” interventions; then, a study describing the combination of these interventions is discussed. Finally, this section expands on the role of the multidisciplinary team in school-based interventions, and the key stakeholders who typically are members of the team, including school counselors, teachers and parents.

History of Autism Spectrum Disorders

When Autistic Disorder (AD) and related disorders were first being described, researchers at the time collectively called the disorders autism. Leo Kanner was the first person to describe infantile autism and distinguish the disorder from other childhood disorders (Happe, 1994). Kanner published a paper in 1943 recounting characteristics of a group of children with a developmental history of “extreme autistic aloneness” (Happe, 1994; Kanner 1943). In this same paper, Kanner identified three defining characteristics of the disorder: social isolation, language impairments, and insistence on sameness. He
also noted that the 11 children he studied had characteristics that could be differentiated from other childhood psychiatric disorders such as schizophrenia because of the early onset of the symptoms, lack of hallucinations and lack of evidence of psychosis in family members of these children (Mesibov, Adams, & Schopler, 2000; Mayes, 2001).

One year later Hans Asperger wrote his dissertation on childhood autistic psychopathy in Austria (Happe, 1994). Although his paper was similar in many ways to Kanner’s study, some scholars later determined that the two authors were actually writing about two different groups of children with significant differences (Happe; Wing, 1991). The main difference between the two groups Kanner and Asperger discussed was the ability to use language. Although both of these men described delayed or atypical social interactions and language delays in their subjects, Asperger’s subjects seemed to have more advanced speech, some savant qualities, and occasional original thoughts. Most people now believe these two researchers were describing two different but related diagnoses: Autistic Disorder (AD) and Asperger’s Syndrome (AS).

Lorna Wing (1991) first used the term Asperger’s Syndrome (AS) as a way of differentiating higher functioning children with autistic tendencies from those who had more delayed communication similar to Kanner’s group (Happe, 1994). Researchers continue to try to discriminate between autism, especially high-functioning autism, and AS. While we know children with autism have an average IQ of 50, there are a number of individuals with autism who have high abilities, making them difficult to discriminate from children with AS who also have above average IQs (Toth & King, 2008). The distinction between autism and Asperger’s Syndrome is currently the absence of clinically significant delays in language and cognitive development in the DSM-IV (American Psychiatric Association, 2000). This distinction is currently a matter of much debate as a proposed revision to the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) includes removal of the diagnosis of Asperger’s Syndrome.
The stated rationale for its removal is the diagnostic inconsistency and variability of differentiating the ASD across clinical sites (American Psychiatric Association, 2011).

In looking at the DSM criteria for ASD, some of Kanner’s and Asperger’s conclusions about these groups of children continue to be used today; however, two of their findings are considered no longer valid. One early misconception from Kanner and Asperger that scholars note is the hypothesis that these disorders were emotional disorders, predominantly caused by parental shortcomings (Mesibov, Adams, & Schopler, 2000; Van Krevelen, 1971). Specifically, infantile autism was “supposedly produced by pathogenic mother-child relationships” (Van Krevelen, 1971); however, researchers like Van Krevelen began to suspect genetic influences in the early 1970’s. Even though the misconception about the mother’s relational influence was recognized early, the damage to family systems had been done. As a result of the original belief in child-rearing practices, families were encouraged to place their children in preventoriums or state hospitals to provide alternate environments for their children’s development (Kanner, 1971), and psychological treatment focused on nurturing (Fenichel, 1974). These conclusions were accepted until Rimland’s book on Infantile Autism in 1964. Even though Rimland and others such as Kanner (1971) modified their determination about the causes of these disorders the myths persist, and current researchers and practitioners continue to try to dispel the myth that parents are to blame for the condition of autism (Mesibov, et al., 2000).

After Kanner’s and Asperger’s papers came out in the 1940s, scholars of the time argued whether or not these two researchers were discussing the same or different groups of people (Mesibov et al., 2000). Researchers continue to scrutinize the diagnostic classification of Autism Spectrum Disorders (Towbin, 2005; Volkmar, State, & Klin, 2009) as compared to other disorders. Even though Kanner (1943) was the first to distinguish the disorder from other disorders such as schizophrenia, and others supported that claim (Kolvin, 1971), individuals who have documented characteristics descriptive
of ASD, have been previously labeled with other disorders such as dementia, affective insanity, mental retardation, childhood schizophrenia or schizoid disorder (Wolff, 2004). In addition, diagnostic classification of subtypes within the spectrum is complex. Experts in research on these disorders suggest the there is a tendency to assume that AD, AS, and PDD-NOS reflect some sort of decrease in severity, which is not a satisfactory way to conceptualize the spectrum (Volkmar et al.). The debate about the difference between autistic disorder and Asperger’s syndrome still permeates from earlier discussions on the disorders, exacerbated by current inability to definitively subtype disorders of the autism spectrum using diagnostic criteria and assessments (Volkmar et al.). So, some researchers continue to argue that AS and AD are the same disorders (Baron-Cohen, 2009). This controversy continues in psychiatry as much debate currently is occurring regarding the two diagnoses of AD and AS in the most recent proposed revisions to the Diagnostic and Statistical Manual of Mental Disorders, 5th edition [DSM V] (Ghazuiddin, 2010; Mayes, Calhoun & Crites, 2000; Wing, Gould & Gilberg, 2010). The proposed changes to the DSM-V would remove Asperger’s Syndrome as a distinct disorder, and AS would be subsumed under the diagnosis of AD (American Psychiatric Association, 2011).

Even though diagnostic criteria continue to be refined for the autism spectrum of disorders, and some misconceptions on the part of early researchers are evident, many of Kanner’s descriptions were very influential in developing the diagnostic criteria for the DSM-III (APA, 1980), which was the first version of the manual that separated autism from schizoid disorders (Sanders, 2009). At the time, the schizoid disorder was described as one of three odd or eccentric (paranoid, schizoid, and schizotypal) personality disorders, and it was characterized by a lack of interest in social relationships, and a preference to be alone (DSM-III, 1980). It was differentiated from Autistic Disorder using several criteria, including stereotypy, significant language delays, and absence of hallucinations or delusions. Rutter (1978) was also influential in developing the criteria for the first version, as he recognized deficits in language development, atypical speech
patterns, and lack of responsiveness to caregivers, and unusual attachments and interests as primary criteria. Another criterion early researchers discussed was onset of symptoms before the age of 30 months. Sanders argues that all but one of the DSM-IV (APA, 2000) criteria for Autistic Disorder could be found in Kanner’s work. Similarly, Asperger’s descriptions of the verbal strengths of his sample have influenced the DSM-IV criteria for AS. Developing the diagnostic criteria for autism and related disorders continues to be complicated and evolving from the past to the very present.

**Current Understanding of Autism Spectrum Disorders**

Today, researchers in the fields of genetics (Human Genome Project, 2009), medicine (Bello, 2009; Kogan, et al., 2009) and psychology (Levy, 2007) define Autism Spectrum Disorders (ASD) as neurobiological disorders rather than emotional disorders (Bello; Kogan; Levy). While the specific cause or causes of the disorders are still unknown, the neurobiological label implies that the disorder has both genetic and environmental causes. Recent information scientists have uncovered suggests a gene-environment interaction is the root of the disorder (Bello, 2007; Human Genome Project, 2009). While scientists work on finding a cause, researchers are working on compiling clear, demographic information about the disorder.

**Gender and ASD**

Autism Spectrum Disorders (ASD) occur four times more often in males than in females (Kogan, et al., 2009; National Institute of Mental Health, 2004), which is similar to the 2000 reports from the Centers for Disease Control. The Centers for Disease Control (2009) funds a group of programs called the Autism and Developmental Disabilities Monitoring (ADDM) Network (2011). The ADDM Network reports put out by the CDC state that the prevalence of ASD in boys ranges from 7.3 per 1,000 (Florida) to 19.3 per 1,000 (Missouri). In girls, the prevalence is 1.0 per 1,000 (Florida) to 4.9 per 1,000 (Arizona).
Ethnicity and ASD

Although considerable variability in prevalence statistics by ethnicity has been reported by state institutions participating in the study conducted by the Centers for Disease Control (CDC; 2006), overall non-Hispanic white individuals are most likely to have ASD, and Non-Hispanic black individuals are next as likely to be diagnosed with ASD. Hispanic individuals, Asian and Pacific Islanders are not as likely to have ASD. Information collected by the CDC notes conflicting evidence about prevalence based on ethnicity in the reports (i.e., in the reports by state, the prevalence rates did not follow consistent patterns based on ethnicity). According to the ADDM Network, a division of the CDC (2009), “ASD prevalence among white non-Hispanic children ranged from 3.8 per 1,000 (Alabama) to 12.6 per 1,000 (Arizona). For black non-Hispanic children, ASD prevalence ranged from 3.2 per 1,000 (Missouri) to 12.8 per 1,000 (Maryland)” (p.1). Specific data about other ethnic groups are not currently available, although studies in “Asia, Europe, and North America have identified individuals with an ASD with an approximate prevalence of 0.6% to over 1%, and a recent study in South Korea reported a prevalence of 2.6%” (Centers for Disease Control, 2009, p. 1). Clearly, it is a disorder that affects all racial and ethnic groups around the world (CDC, 2009).

Other Demographic Information

In a study to determine the severity of the ASD disorders after they have been diagnosed, Kogan (2009) surveyed parents to find how they categorized their child’s autistic severity. About 50% of the individuals diagnosed with ASD were described as having a mild form of the disorder by their parents; whereas, a little less than 34% reportedly had a moderate form of the disorder, while slightly more than 16% reportedly had a severe form of the disorder (Kogan). The disorders seem to be slightly more prevalent in the Northeast and Midwest parts of the United States, and less prevalent in the South and West parts of the U.S. (Kogan).
Comorbidity of ASD and Other Disorders

Autism Spectrum Disorders (ASD) are also accompanied by other disorders. Individuals diagnosed with Autistic Disorder (AD) have a co-occurrence of mental retardation 75-80% of the time (National Institute of Mental Health [NIMH], 2009). One third of individuals with ASD develop seizures (NIMH). Psychological disorders such as anxiety, depression and obsessive tendencies typically associated with Obsessive Compulsive Disorder (OCD) may also present themselves in individuals diagnosed with ASD (NIMH).

Features of Autism Spectrum Disorders

Children with ASD show a broad range of impairment with great variability in levels of functioning and presenting concerns (NIMH, 2004). Each of the autism spectrum disorders has characteristics that overlap with the other disorders. For example, individuals diagnosed with Autistic Disorder (AD) and Asperger’s Syndrome (AS) both show marked impairment in nonverbal behaviors; however, individuals with AS do not have clinically significant delays in language acquisition in early childhood (American Psychiatric Association, 2000). Therefore, researchers continue to study individuals with the specific disorders to be able to differentiate among them. Schopler and Mesibov (1992) explain that the autism spectrum of disorders is not on a linear continuum. For example, some ASD individuals have low cognitive abilities, while some are considered twice exceptional (i.e., an individual diagnosed with an ASD and identified as gifted); some have severe behavior problems, while others function fairly well socially. Some examples of signs and symptoms that are pervasive across the spectrum include: developmentally delayed language skills, lack of understanding of metaphoric or symbolic language, or possibly no speech at all; repeated focus on particular words or topics such as parrot-like speech patterns called echolalia, perseveration on specific objects or themes, or extreme difficulty with change (e.g., a new shirt, modifications in
daily routine); impaired social relations such as difficulty making eye contact and inability to understand others’ perspectives (Centers for Disease Control, 2005).

Unlike other disorders, there is currently no specific test to determine if a child has ASD or not. Rather, psychologists and other specialists use multiple assessments, and have agreed on general diagnostic criteria as defined in the DSM-IV-TR (2000) to identify individuals with Autism Spectrum Disorders. Most medical practitioners believe persons with autism typically display the triad of impairment (Brown, 2004; Happe, 1994), which includes communication and language delays, stereotyped behaviors, and social interaction impairments. These impairments will be described in more detail in the following sections.

**Communication and Language Delays**

As previously mentioned, one of the diagnostic criteria in identifying an individual with an autism spectrum disorder is an impairment in communication evidenced by a delay or lack of development of spoken language, or a marked impairment in initiating or sustaining a conversation with others, which may include stereotyped and repetitive use of language (e.g., echolalia) or idiosyncratic language (American Psychiatric Association, 2000). Typically, language development of individuals varies in relation to their tested IQ, which is also true of individuals with autism spectrum disorders. However, individuals on the spectrum have specific differences in language development that differentiates them from their peers with similar intellectual abilities. These differences vary with the level of intellectual functioning. For example, individuals with comorbid diagnoses of autism and mental retardation may have difficulty developing speaking ability or may be significantly delayed in these abilities. Those individuals having a diagnosis of mental retardation and ASD must have specific signs of autistic disorder, such as stereotyped behaviors or restricted, repetitive routines. Other individuals with autism who fall in the normal range on measures of intelligence generally have moderate vocabularies and adequate formal language skills (Tager-
Flusberg, Paul & Lord, 2005). However, these individuals have more difficulty with conversation and social uses of communication (Tager-Flusberg et al., 2005) such as understanding humor, and metaphorical and symbolic language.

Language and communication delays may be more difficult to distinguish in individuals with ASD who are also gifted (i.e., individuals who score two to three standard deviations above the mean on measures of intelligence). Gifted students who also have ASD, sometimes called twice-exceptional students, also score extremely well on these measures of aptitude and ability. Therefore, they have strong verbal skills and a well-developed vocabulary. However, studies have shown that gifted individuals with ASD also have disabling impairments in communication that affect their ability to function (Assouline, Foley Nicpon, & Doobay, 2009; Klin, Saulnier, Sparrow, Cicchetti, Volkmar, & Lord, 2007). These communication and language delays may be more negligible and difficult to identify without thorough psychological testing (Assouline et al., 2009). Individuals who are profoundly gifted are marked by high levels of verbal ability, but have difficulty with the pragmatic use of language (Assouline et al., 2009). Communication or language delays are evident in all individuals diagnosed with ASD; although, they may present themselves differently depending on an individual’s intellect and other idiosyncrasies.

**Stereotyped Behaviors**

Stereotyped behavior is another one of the diagnostic criteria of autism spectrum disorders, which also is demonstrated in varying ways among individuals on the autism spectrum. Rapp and Vollmer (2004) define stereotypy as problematic behavior, which (a) takes up a significant amount of time, (b) lacks a clear social function, (c) is repeated with invariance, and (d) is salient with insensitivity for contending social variables. Types of stereotyped behaviors include repetitive behaviors such as hand-flapping, body-rocking, echolalia, self-stimulation, perseveration, or intense preoccupation or insistence on sameness (Lewis & Bodfish, 1998). Non-repetitive behaviors that are considered
stereotyped behaviors include limb and body posturing such as a head tilt or arching of the back (Rapp & Vollmer). Self-injurious behaviors may also be regarded as stereotyped behaviors when they are also repetitive, rigid, invariant, and continue without regard to competing social variables (Gal, Dyck, & Passmore, 2008). To discriminate stereotyped behaviors from tics or involuntary muscle movements, researchers describe stereotyped behavior as an operant as opposed to a respondent behavior (Rapp & Vollmer). In other words, these stereotyped behaviors have been reinforced in the environment because they allow the individual to navigate the world better (e.g., head tilt to visually understand the situation), or they simulate neurotypical behavior (e.g. waving at a person every time a person enters a room), which is reinforced through rewards by caregivers.

Stereotyped behaviors can have an effect on the social functioning of individuals diagnosed with ASD. For example, Matson, Fodstad, and Rivet (2009) found that low levels of stereotypy were associated with increased positive social skills in adults with ASD. Stereotypy affects the social interaction of individuals with ASD because they may present the behaviors at socially unacceptable times such as during a personal conversation or in classroom instruction (Hagopian & Toole, 2009). Some of these repetitive behaviors result in interruption in play activities or may reduce leisure time so that individuals with ASD may actually have less time to interact socially with their peers. Higher functioning individuals with ASD may experience frustration when they work with others in group activities or on a team because of their tendency toward rigidity, perseveration on a specific topic or insistence on sameness. While stereotyped behaviors are considered separate from social delays as diagnostic criteria in the DSM-IV for autism, stereotypy does have an impact on the social development of the autistic individual.

**Social Interaction Impairments**

Specific social impairments distinguish children with ASD from typically developing children and children with other disorders. One such type of impairment is
called *social orienting*, which includes behaviors such as responding to name or verbal or nonverbal prompting. This impairment limits the typical attraction that infants and young children demonstrate toward social stimuli (Dawson et al., 2004). Orientation to social interactions such as smiling or turning a head toward a voice is not spontaneous in infants with ASD. Lack of social orienting is believed to lead to late emerging social and communication delays. Research on the causes of social orienting is still occurring, although researchers have suggested that attention deficits may be related to a lack of social orienting (Dawson et al., 2004).

Another reason individuals with ASD display social delays is their inability to maintain joint attention (Dawson et al., 2004). *Joint attention* is the ability to share the focus on a particular object with another person which occurs in typically developing children between 9 and 18 months of age (Colombi, Liebal, Tomasello, Young, Warneken, & Rogers, 2009). For example, a typically developing child may demonstrate joint attention to a ball with an adult by rolling the ball back and forth between them. Children with ASD have impaired joint attention, so they have difficulty sharing other’s attention through behaviors such as following eye gaze or cooperative or reciprocating activities. Researchers argue that joint attention is one of the primary building blocks for language acquisition (Mundy & Crowson, 1998). This characteristic of joint attention impairment also leads to difficulty in early social interaction such as showing an object to another person, or pointing to an object of interest (Jones & Carr, 2004). According to Jones and Carr (2004), interventions to improve joint attention in children with ASD are being developed and studied. The results of two studies have suggested improved joint attention may be a secondary benefit of social skills interventions targeting other behaviors (Baker, 2004; Pierce & Schreibman, 1997). It is important for researchers and practitioners to learn ways to improve joint attention in children with ASD as the developmental connections between joint attention and language and social development are strong (Jones & Carr).
Social development is also delayed in children with autism because they respond to emotion in atypical ways compared to their same-aged peers (Dawson et al., 2004). For instance, when children are shown an adult’s distressed face, children without autism respond by comforting or helping the adult. Individuals with ASD respond with less concern and a more neutral affect. One suggested explanation for neutral affect is that individuals with ASD are not motivated or interested in shared affective experiences (Dawson et al., 2004). In group counseling for teenagers with autism, researchers found that the participants were more likely to reciprocate social response to emotion if they were given a cognitive explanation for the importance of the social response in relation to their own well-being or the well-being of others in the group (MacKay, Knott, & Dunlop, 2007). It is important for practitioners and researchers to understand the impairments of individuals with ASD so that they can develop interventions that remediate these impairments.

**Current Interventions for Social Development**

Some experts argue that social dysfunction is the most handicapping characteristic of autism (Rogers, 2000). Therefore, social skills interventions are essential to the overall development of individuals with ASD. Inclusion in general education classrooms does not necessarily lead to improved social interactions (Myles, Simpson, Ormsbee & Erikson, 1993); thus, specific social skills interventions are necessary to improve the gaps in social development individuals with ASD display. Some interventions which have been researched and shown to be effective include Social Stories™, video modeling, self-management, priming, written scripts, and pivotal response training (Rogers, 2000; Scattone, 2007). Two of these interventions in combination, Social Stories™ and video modeling, will be the intervention of focus in this research study.

**Social Stories™**

Researchers have demonstrated that the use of Social Stories™ has improved communication and modified unacceptable social behavior in students with
developmental delays such as autism. Developed by Carol Gray (1994), Social Stories™ (SS) describe situations, skills, or concepts in terms of social cues through written scripts made into stories or by using pictures in a frame-by-frame or cartoon format. Carol Gray designed these stories with the philosophy that individuals with autism and neurotypical individuals have “two equally valid but different perspectives” (Gray, 2009, p. 8) of social interactions. Therefore, Gray’s Social Stories™ were created to develop mutual understandings between neurotypicals and individuals with ASD by following ten defining criteria that intend to communicate, connect, and categorize information, allowing individuals with ASD to develop conceptual understanding of social expectations of neurotypical individuals (Gray, 2009).

Social situations are often guided by unwritten rules, and many of these rules are learned by watching others modeling socially acceptable behavior (Gray, 2009). Children with ASD have difficulty recognizing and formulating these unwritten rules, and they may also have missed learning opportunities from modeling because of their difficulty with joint attention. Therefore, children with ASD need guided and direct instruction focusing on particular skills or parts of skills, to gain social knowledge, which Social Stories™ provide. The stories are written, using a specific combination of descriptive, perspective, affirmative and coaching (formerly called directive) sentences that are combined to form the story (see Appendix B). Social Stories™ are not meant to influence or persuade a student to use a behavior. Instead, the story is usually written to describe a skill or a situation. Then, the story can be read to or read by a person with ASD. In addition to reading Social Stories™ like a storybook, Social Stories™ can also be delivered in a cartoon format (see Appendix C). These stories can be bought commercially, can be written by a trained interventionist, or can be written by the person with ASD with guidance from someone trained in writing them. Those who write Social Stories™ in any format should be adequately trained to write them correctly. Training is
reiterated here, as it is crucial because Social Stories™ can be written incorrectly and used inappropriately (e.g., in a punitive way) (Gray, 2009).

Once the person with autism has a visual or verbal understanding of the rules or social expectations that neurotypicals follow, they are more likely to choose to follow them as well. Social Stories™ can be adapted to convey a countless number of social rules, including everything from toilet-training to turn-taking, or from greeting to choosing appropriate clothing for the weather or an event.

The research on the effectiveness of Social Stories™ with the ASD population is strong and comprehensive, but variable results exist about how the intervention should be used. A systematic review of controlled trials by Karkhaneh and colleagues (2010) found that Social Stories™ showed positive short-term improvements in social behavior in school-aged students with ASD. In a meta-analysis of single-subject studies (Kokina & Kern, 2010) of Social Story™ interventions, the researchers found the Social Story interventions to have low to moderate effectiveness with school-aged children. They also concluded that Social Stories™ was more effective in reducing problem behaviors than in increasing social skills (Kokina & Kern). In other studies of Social Stories™, individuals with ASD have shown improved understanding of social expectations such as game play skills (Quirmbach, Lincoln, Feinberg-Gizzo, Ingersoll, & Andrews, 2008), mealtime skills (Bledsoe, Myles & Simpson, 2003), classroom etiquette (Agosta, Graetz, Mastropieri, & Scruggs, 2004), conversational protocol (Theimann & Goldstein, 2001), and behavioral appropriateness (Swaggert et al., 1995). Since children with ASD sometimes insist on sameness in their routine, Social Stories™ may also prepare the child with ASD for a change in routine or a novel situation (Ivey, Hefflin, & Alberto, 2004). Even though several studies have explored the effectiveness of this intervention, more research is needed to determine how best to use them with the school-aged population in natural settings such as school and home settings.
**Video Modeling**

Video modeling is another social skills intervention that has been shown to be effective with individuals with ASD in several studies, as described in two meta-analyses (Bellini & Akullian, 2007; Wang, Cui & Parrila, 2011). Video modeling is based on Bandura’s social learning theory (Bellini & Akullian) and applies modeling techniques in which a sample of a given behavior is presented to an individual in a video format to encourage observation and then imitation of the presented behavior (adapted from Martin & Pear, 2002). Video modeling interventions have been effective in increasing social skills such as initiating play related statements (Taylor, Levin & Jasper, 1999), instigating social interactions (Nikopoulos & Keenan, 2003), following schedules (Dauphin, Kinney, & Stromer, 2004), and using pretend play skills (Reagon, Higbee, & Endicott, 2006).

Other skills related to social development with which video modeling has shown positive effects include imitation of others (Cardon & Wilcox, 2011) and social expression (Charlop, Dennis, Carpenter, & Greenberg, 2010).

A meta-analysis conducted by Bellini and Akullian (2007) examined 23 single-subject design studies of video-modeling. These researchers (Bellini & Akullian) concluded that video modeling is an effective intervention strategy for improving social-communication skills, behavior and adaptive skills in children and adolescents with autism, Asperger’s Syndrome and Pervasive Developmental Disorder, Not Otherwise Specified (PDD-NOS). The average length of treatment for these interventions was considered brief, or nine to ten sessions, with results sustained over time. Bellini and Akullian noted that most of the studies combined video modeling with other interventions and suggested that studies looking at video modeling in isolation would be helpful, as well as studies using larger sample sizes and naturalistic settings such as schools.

To make a video to use for video modeling, the counselor simply develops a video of the target behavior for the student to emulate. The counselor can select a student who the child knows or likes and ask that student to demonstrate the behavior while
being videotaped. (It may be necessary to get parents’ permission to do this.) It is important to record the behavior done properly in context when possible, such as the setting in which the skill will be used. For example, if you want to model waiting in line, tape the student modeling appropriate behavior in line in the cafeteria, or at the water fountain, or wherever the student would be asked to wait in line. It may also be necessary to break down a more complex skill, such as greeting someone, into smaller steps. Using audio to articulate what the person in the video is doing well can be helpful. If audio is used, it is most often helpful to only use simple phrases so that the student can focus on the video. For example, the instructor could add audio to the video and say, “When waiting, remember hands to your side.”

The Combination of Social Stories™ and Video Modeling Interventions

As previously mentioned, two interventions have shown effectiveness for improving social relations with students with ASD in research studies. One of these interventions, Social Stories™ (Gray, 1994), has shown to improve social skills in children with ASD in school settings (Chan, 2008; Ozdemir, Universitesi, Egitim, Ozel, & Bolumu, 2008; Scattone, Tingstrom, & Wilczynski, 2006). Video modeling has also been an effective intervention with the autism population (Bellini, Akullian, & Hopf, 2007; Nikopoulos & Keenan, 2004). So far, only two studies (Scattone, 2007; Theimann & Goldstein, 2001) have tested the combination of these interventions. Scattone (2007) used a multiple baseline design with one elementary school-aged boy to target behaviors such as eye contact, smiling, and initiations of communication. Scattone designed three Social Stories™ focusing on social development of these targeted behaviors. Video modeling was also used as clinicians read the Social Stories™ in the video and then modeled the target skill through a conversation on the video. Baseline data and percentage of non-overlapping data (PND) were collected, showing a highly effective outcome for both eye contact and verbal initiations. Smiling was below the 50% level
suggesting an unreliable treatment outcome for that particular skill. Scattone (2009) advocated for initiation of further research to differentiate among the individual components of the combination treatment, as well as further study of the combination intervention to substantiate the findings in her study.

In the Theimann and Goldstein (2001) study, each treatment consisted of 10 minutes of instruction such as social story instruction, followed by ten minutes of social activity and ten minutes of watching a video of self-evaluation using a video of their social activity time. Using a multiple-baseline design, the researchers found that all five participants showed improved and more consistent social behaviors, although they cautioned that removal of adult or peer-mediated support may have impacted overall treatment gains and sustainability of the noted improvements. Combination interventions such as this Social Stories™ and video modeling intervention may be selected by multidisciplinary teams to meet the needs of students with ASD in schools.

**The Role of Multidisciplinary Teams**

Multidisciplinary teams, sometimes referred to as child study teams, student assistance teams, or prereferral teams, are school-based teams that initiate, implement, and monitor prevention and intervention programs so that students in elementary and secondary schools can reach state and local educational standards and benchmarks (Torres-Rodriguez, Beyard, & Goldstein, 2010, Young & Gaughan, 2010). Multidisciplinary teams are typically comprised of school administrators (principals, and/or vice principals), school psychologists, school counselors, teachers (regular and special education) and parents. At times, other specialists such as speech and language pathologists, occupational therapists, physical therapists, social workers, and medical professionals (nurses, doctors) are called upon to be a part of the teams to support the particular needs of a student being reviewed (Virginia Department of Education, 1993; Wake County Public School, 1995; Torres-Rodriquez, Beyard, & Goldstein, 2010).
Multidisciplinary teams were originally organized to support students who had substance abuse issues, discipline problems, and were drop-out risks (Belcher, 1995). As schools continued to be challenged to meet the changing needs of students, other issues began to be filtered and addressed through the multidisciplinary team. Belcher categorized these issues into four main areas: 1) education-related issues (e.g., poor attendance, low ability in subject areas), 2) family-related issues (e.g., grief recovery, abusive home environments), 3) socio-economic-related issues (e.g., the need for a student to work in addition to school to support a family in poverty, homelessness), and 4) social and psychological-related issues (e.g., limited English language proficiency, disabilities) (p. 6). As a broad array of student issues such as these came through the team problem-solving process, the multidisciplinary team became the vehicle through which schools could meet federal and state accountability requirements for students at-risk. To meet one of the requirements of the Individuals with Disabilities Education Act (1984), a team of trained professionals must use nondiscriminatory methods of identification and evaluation of students who may have a disability. Initially, this requirement was being met by a “Refer-Test-Place model” (Shinn, 1986, p. 49), which led to high numbers of students placed in special education classrooms and segregated from regular education students in the 1980’s (Fagan & Wise, 1994). After students were placed, data were rarely collected on their progress toward goals, or the effectiveness of the assigned interventions (Shinn). Criticisms of this model led to changes in the Refer-Test Place model. One movement led by members of the federal government and a group of practicing educators advocated for the Regular Education Initiative (D’Alonzo & Boggs, 1990). Proponents of the Regular Education Initiative called for regular education and special education to work as one system rather than two. This initiative was in line with the 1997 amendments to IDEA, which asked for integration of general and special education, and focused on student outcomes and prevention programs to reduce special education placements. So, researchers and practitioners saw the need for assessment of
the outcomes of students placed in Special Education programs (Shinn). The push for inclusive educational practices for students with disabilities followed (Bartlett, Weisenstein, & Etscheidt, 2002), and so the multidisciplinary team and the special education identification process in many school districts merged.

Examples of the consolidation of these two systems can be found in various states across the country such as Virginia (Virginia Department of Education, 1993). In Virginia’s manual, “Procedures for Child Study Committees in Virginia” (Virginia Department of Education), the authors write that any student can be referred to the Child Study Committee, and that all those referred must go through the same procedural process that can lead to “the development of an intervention plan which may or may not include referral to other existing programs/services such as Chapter 1, Chapter 2, Gifted Education, and Special Education and Related Services” (p. 13). The Virginia example shows how multidisciplinary team models evolved into one system to serve all students. All students were subsequently funneled through one team problem-solving process, rather than two separate, distinct processes for regular education students and special education students.

The integration of the two systems changed the role of the multidisciplinary team (Belcher, 1995). Now, this new role goes beyond testing and placing students in special education. Multidisciplinary teams provide prevention services, identify students for intervention, and match them with an appropriate, research-based intervention (Belcher). They also assess the student by collecting data before, during, and after the intervention, or by assessing the severity of the student problem, and making appropriate referrals as needed to services such as special education or community-based agencies (Belcher; Virginia Department of Education, 1993). Multidisciplinary teams currently use a problem-solving process for supporting students. While each team may have varying terms for the stages of their process, those identified by Young and Gaughan (2010)
include: “1) Problem Identification, 2) Data Collection, 3) Problem Analysis, 4) Problem Redefinition, 5) Intervention Development, and 6) Evaluation” (p.115, Table 3). Through these stages, multidisciplinary teams have become the mechanism through which schools can demonstrate how they are addressing student concerns using research-based interventions. The multidisciplinary team problem-solving process also can be used to document a school’s compliance with state and federal mandates. For example, schools need to show how they are complying with the Individuals with Disabilities Education Improvement Act (2004), which was specifically created to align with particular components of No Child Left Behind (NCLB, 2001). Because NCLB requires the use of research-based interventions, multidisciplinary teams are required to use them to meet student needs.

**Response to Intervention (RTI)**

One way multidisciplinary teams can show they are meeting student needs, is by gathering data on students and their respective assigned interventions through the Response to Intervention (RTI) model (Hoover & Love, 2011; Sugai & Horner, 2009). In the RTI process, all students in a school are taught using research-based curricula and methods. After the curriculum has been delivered, the school systematically monitors student progress toward identified standards and benchmarks using school-wide assessments. When students’ needs are not being met through the general curriculum, these students are typically referred to the multidisciplinary team. Then, the multidisciplinary team goes through the aforementioned stages of the process (Young & Gaughan, 2010). This process involves identifying the student, collecting data on the student, creating a hypothesis for the problem, and then selecting an intervention that is research-based for the identified problem to improve the outcome of the student.

Students who are below their peers or below local or state standards may need a higher level of intervention. There are three tiers in the RTI process that relate to the intensity of the intervention. At Tier 1, research-based approaches are implemented in the
general education classroom curricula (Hoover & Love, 2011) to most students. Those students who struggle at this level may require supplementary instruction at the Tier 2 level of intensity. Tier 2 interventions typically require a smaller teacher to student ratio, more time or repeated practice, or other methods of instruction than most students in general education do not need. If students still do not show adequate progress with Tier 2 interventions, then they receive the most specialized instruction (i.e., an increase in frequency, intensity and/or duration) at the Tier 3 level. Tier 3 interventions may require a high level of professional support, significant accommodations or adjustments to the curricula or daily routine, or a separate setting in which to learn. Most students (90-95%) can be served successfully in Tiers 1 and 2 (Hoover & Love).

While RTI provides teams with systematic methods of following student progress, the RTI system is complex. Using RTI, members of multidisciplinary team are challenged to consider an array of interventions, delivered in a variety of ways, in increasing levels of intensity across the various settings in a school (Sugai & Horner, 2009) to meet the particular needs of each student. Furthermore, sometimes disagreement exists over which services are most effective, in what settings, over a specific amount of time (Bitterman, Daley, Misra, Carlson, & Markowitz, 2008). And, as mentioned in the introduction, an intervention that works for one student may not work as well for another (Dawson & Osterling, 1997). Certainly then, achieving positive outcomes through intervention for all students who are referred to the multidisciplinary team is a difficult task. Currently across the country, though, schools have identified the response to intervention (RTI) model as best practice to meet the needs of learners who are having difficulty in school (Hoover & Love).

**Effectiveness of Multidisciplinary Teams**

Even though meeting the needs of students is challenging, overall multidisciplinary teams have been found to be somewhat effective (Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990; Torres-Goldstein et al., 2010). In one study, researchers
(Fuchs) studied the effects of decisions made by multidisciplinary teams (called prereferral teams in the study). Students who were referred by multidisciplinary teams to interventions in the most inclusive environments significantly reduced academic discrepancies between themselves and their peers. In another study about the effectiveness of multidisciplinary teams, Rankin and Aksamit (1994) identified three variables that multidisciplinary team members believed to lead to the team’s effectiveness, including the commitment of team members to the students, the collective knowledge of the team because of the various types of expertise within it, and the teachers’ perceptions the team’s support in the form of problem-solving ability, time allowances, resources, and administrative assistance. Hoover and Love (2011) also note that RTI is grounded in data-based decision making and the implementation of research-based interventions (Hoover & Love, 2011), so multidisciplinary teams who use RTI with integrity find this approach to improve instructional decision making and outcomes for many students they serve.

In a study of multidisciplinary teams over four years (again called prereferral teams in this study), Young and Gaughan note positive results when the following criteria occur: 1) strong, consistent leadership, 2) allocation of time to go through the decision making process, 3) funding to create a part-time facilitator position to organize the process, and 4) stability in team membership. Still, multidisciplinary teams may be challenged to work effectively at times. In the same study, they found that the teams spent most of their time in the problem identification stage, and focused on the child-centered factors rather than ecological factors contributing to the student issue (Young & Gaughan). Teachers, at times, were reluctant to collect data to monitor students, or had difficulty defining the problem based on the data. Some schools’ teams were more willing than others to consider in-class rather than out-of-class interventions (higher in intensity). At times the teams were off-task as well. These researchers note that one team in particular was not open to changes in the process, so they this team made suggestions
for intervention that were less diverse (same interventions were suggested often), and involved out-of-class settings. This finding suggests that openness of the team and its individual members to alternative points-of-view can lead to interventions that are more fitting to each individual.

**Parents as Multidisciplinary Team Members**

Parents and/or guardians of students who have been referred to the child study process are typically invited to be members of school’s multidisciplinary teams. Parents have a right in the United States to attend formal meetings about their children, and collaborate with professional members of the multidisciplinary team (IDEA, 1984). One of the provisions of IDEA legislation is that parents have a right to participate in educational decision making regarding their children with regard to special education placement and services, and goal-setting. Procedural safeguards have been established under the same legislation so parents can follow due process if they disagree with the school district’s decisions. Parents of students with a 504 plan or considering a 504 plan also have the right to be a part of the development committee (usually the multidisciplinary team) and can request follow up meetings if students’ needs are not being adequately met, or if modifications to the plan are needed to support the student (Office for Civil Rights of the United States Department of Education, 2011). While attendance at formal meetings is a legal right of parents, it is not the only reason to encourage parent involvement.

**The Significance of Parent Involvement**

Studies have shown that parent involvement can have positive effects on the education of children with ASD (Avdi, Griffin, & Brough, 2000; Benson, Karlof, & Siperstein, 2008; Harte, 2009). In a large study comparing parental and professional views of ASD (Dillenburger, Keenan, Doherty, Byrne, & Gallagher, 2010), researchers found that professionals had different views than parents about their child’s behavior. As these researchers argue, when professionals and parents see behavior differently,
establishing target behaviors and norms for a child becomes difficult. These disparate views can also lead to parents’ feeling helpless in supporting their child’s educational goals (Ditrano & Silverstein, 2006). Parents of children with disabilities, however, are interested in learning how school systems work so they can be actively involved in their children’s education (Ditrano & Silverstein). This may be in the best interest of schools, too. Parent reports of behavior are often very accurate (Harte, 2009). One method to gather behavioral information from parents of children with disabilities is the time-use diary (Thomas, Hunt, Hurley, Robertson, & Carter, 2010). The time use diary can help service providers connect home to school and community services, and may allow helping professionals outside of the home to better understand the needs of the child, and the reality of life with a child with a disability from the parents’ perspectives. Photovoice is another method pairing photographs with interviews to gather parental perspectives of their children (Harte). Finding ways such as these to connect home and school can improve selection of target behaviors, and may help with generalization of those behaviors to school, community, and home environments. Overall, researchers stress the importance of treating parents as experts of their own children to improve educational decision-making in schools (Billington, McNally, & McNally, 2000; Dillenberger et al.; Ditrano & Silverstein; Harte).

**Factors Contributing to Positive Parent Involvement**

Schools should consider several factors that may contribute to parents’ involvement in their children’s education and in multidisciplinary team. Factors that affect parent’s involvement in the education of their students with Autism Spectrum Disorders include the severity of the problem behavior, the functionality of the student’s language, and the existing demands on the parents’ time (Benson, Karlof, & Siperstein, 2008). Helping parents develop support networks outside of the school may decrease demands on parents’ time, allowing them to participate in meetings or work towards educational goals with their children (Benson et al.). In addition, school personnel can
have a direct impact on parental involvement. The single most powerful predictor of maternal educational involvement is the extent to which school personnel encourage it, and provide opportunities for it (Benson et al.). In one article, parents of a student diagnosed with autism suggest that educators can do the following to improve parent-educator partnerships:

See parents as the best resource, engender positive attitudes toward autistic children and their parents, create non-judgmental environments for them, empower parents to play key roles in decision-making, promote genuine dialogue with parents, and be aware of the profound impact of their words and attitudes on parents. (Billington, McNally, & McNally, 2000, p. 65)

**Factors Deterring Parent Involvement**

While it is important for educators to be aware of what improves relationships with parents, it is also important to know what causes strife between parents and schools. In a poignant article co-authored by a school psychologist and parents of a student with autistic disorder, several concerns with the educational system were shared. “We initially felt a sense of relief that responsibility for Tom would now be shared, but this soon turned to disappointment when our intimate observations were not apparently valued, nor incorporated into teaching process at school” (Billington, McNally, & McNally, 2000, p. 62). These parents also felt they had little or no choice regarding the educational placement of their child, the priorities set for their child (e.g., academic skills were higher in priority to the school than developing self-esteem), or the curriculum used (i.e., their child was “contained” not instructed, p. 63). Eventually through work with the psychologist co-authoring the article, the parents explained that they felt like they were re-established as experts of their own son.

Other researchers identified variables that led to decreased or conflicted parental involvement. Mothers of children with ASD were less likely to be involved in home-based efforts to support school goals when their children were labeled more severe or had limited verbal language (Benson, Karlof, & Siperstein, 2008). They also found that mothers who were caring for more than one child with a disability had a negative effect
on their school involvement. Fish (2006) identified other areas of frustration for parents of children with ASD. At times, parents felt their children were punished for their disabilities. They also felt meetings were meaningless when goals were not updated or read by teachers, or when the goals were already written before the meeting, which suggested to parents that their input was not valued. At times, parents felt educators knew less about their child’s disability or the interventions provided for them than they did (Billington, McNally, & McNally; Fish). When parents had these perceptions, frustration and disagreements occurred between the parents and educators (Fish).

**Teachers as Multidisciplinary Team Members**

One of the primary reasons for the multidisciplinary team model is to provide support and consultation to teachers (Fuchs, Fuchs, Bahr, Ferstrom, & Stecker, 1990) of children who are having difficulty in the classroom. In the multidisciplinary team model, team members as consultants help the teacher to explore antecedents and consequences in the classroom setting to identify variables that contribute to problem behaviors. Then, the consultants work with teachers to modify those variables to decrease the intensity, frequency or duration of the problem behaviors in the classroom. The multidisciplinary team develops a plan and work with the teacher to implement the plan to improve the student’s performance and or behavior (Fuchs).

Even though one of the goals of the multidisciplinary team is to support teachers, for several reasons teachers do not always feel comfortable referring students to the multidisciplinary team. Teachers may not be familiar with the process, or they may feel a referral makes them look incompetent in some way (Rankin & Aksamit, 1994). Teachers may not believe the school will provide support in the form of time or resources, but rather will cause more work for them later (Rankin). Teacher referral and active problem-solving is an important part of the RTI and special education identification process, though, so students who need specialized accommodations and services are provided them (Fuchs). In addition, Royer (1997) found that students were more likely to transfer
learned skills to other settings when the target behaviors were selected by teachers and parents together. So, positive student outcomes are more likely to occur when teachers working with other members of the multidisciplinary team.

Even though teacher referral and engagement in the multidisciplinary team process is important, both have been criticized. These criticisms include an over-reliance on anecdotal reports and information from teachers, and a lack of data for identification of students with concerns (Lane, Pierson, Robertson, & Little, 2004). Another issue with teacher referral is that some types of concerns are more likely to be referred on to the multidisciplinary team by teachers than others. Reading and writing concerns and attention issues were the most likely presenting problems to be referred, while other behavioral concerns such as anxiety or withdrawal were not as likely to be referred to the multidisciplinary team (Lane).

On the other hand, teachers have not always felt the multidisciplinary teams are supportive of their work, or that the interventions plans developed by the multidisciplinary teams are effective (Lane et al., 2004; Slonski-Fowler & Truscott, 2004). In the aforementioned study, teachers reported the multidisciplinary team targeted important goals, were procedurally acceptable, and were implemented with fidelity, but they did not feel the outcomes of the intervention plans were effective (Lane). Teachers who did receive follow up support from the multidisciplinary team reported more favorably upon it. When teachers felt their opinions were not valued, or felt the team did not respond adequately to the presenting concern, teachers were less likely to refer students to multidisciplinary team again, or did not contribute to the team actively (Slonski-Fowler). However, in another study researchers (Rankin & Aksamit, 1994) found that multidisciplinary team coordinators and administrators perceived teachers to be less satisfied with the multidisciplinary team process than they actually were.
School Counselors as Multidisciplinary Team Members

School counselors can help teachers, multidisciplinary team coordinators and administrators in the multidisciplinary team process by providing a variety of services to students and these teams (Carpenter, King-Sears, & Keys, 1998). School counselors often use their group counseling skills to facilitate the multidisciplinary team process, which is integral to the cohesion of the team and progression toward achieving an agreed upon action plan. School counselors can also act as collaborators to work with other team members by collecting information about a student, sharing knowledge about human development, and by suggesting research based strategies to meet students’ needs (Carey & Dimmitt, 2008; Carpenter et al.). Advocacy is another important role the school counselor can offer families, which involves coaching parents on their rights and responsibilities, as well as modeling strength-based strategies that help parents feel positive about being a part of the team (Geltner & Leibforth, 2008). In addition, the school counselor can act as a liaison to assist parents and community agencies with communication and service coordination within the school as a part of the multidisciplinary team process. Of course, school counselors can provide direct service to students such as individual or group counseling as a multidisciplinary team-recommended research-based intervention while following the Response to Intervention (RTI) protocol. Like teachers, school counselors are expected to provide direct services that are both standard-based and research-based, while collecting data to ensure positive student outcomes (Carey & Dimmitt). If students are placed in special education, school counseling interventions are considered related services under IDEA (1984) and can be written into their IEP goals and delivered to students directly. Direct services may also include vocational, career or post-secondary counseling (Levinson, 1986). At times, it may be beneficial for the school counselor to act as a case manager to support the student and the multidisciplinary team (Carpenter et al.). This role would encompass
coordination of the intervention delivery, data collection, communication with team members, and verification that records are kept and stored properly.

**The School Counselor’s Role with Students with ASD**

The American School Counselor Association (ASCA) has clearly stated its recommendations for school counselors and students with disabilities. “School counselors are expected to help students realize their potential and make adequate yearly progress despite challenges that may result from identified disabilities and other special needs” (ASCA, 2004, p.1).

Possibly, since autism and similar disorders were considered rare disorders in the past, and individuals who had the disorder were served in specialized programs, there may not have been a clear need for school counselors to work with these students. Now, since the number of students diagnosed with an autism spectrum disorder has increased in prevalence and these students are regularly integrated into public schools and regular education classrooms, there is a need for research on evidenced-based practices delivered by school counselors to students with ASD.

The significance of the scarcity of research on methods or interventions for counseling students with ASD in the school counseling field is noteworthy. As mentioned in the introduction, only two journal articles have been published regarding school counselors’ work with this special population. One of these articles written by Gibbon and Goins (2008), gives the school counselor general information about individuals with Asperger’s Syndrome and ways to develop a working relationship with students with the disorder. In the other article, Moorhead and colleagues (2008) conducted a wellness assessment of a student with AS, and then they implemented a 5-month treatment plan intended to improve the overall wellness of the student. While these two articles are important contributions to the school counseling field, much more research needs to be conducted and published to support students with ASD. It is important for school counselors to see research on interventions for this population in school counseling
journals for three reasons: (a) School counselors can realize their role in working with and advocating for this population, (b) school counselors can learn the research-based methods for this particular population to be competent in their work with them, and subsequently, (c) students with autism spectrum disorders can benefit from school counselors’ services in the academic, career, and personal/social domains.

The American School Counselor Association (ASCA, 2005) has delineated standards and benchmarks for school counselors to support K-12 students to achieve in each of the academic, career, and personal/social domains. While research is needed in all three of these areas with the ASD population, this study will focus on how school counselors can work with elementary students with ASD to meet the personal/social standards as a part of their developmentally appropriate, comprehensive school counseling program.

The time frame of the intervention for an individual with ASD must be considered in this study, so that the intervention is feasible for both the school counselor and the student with ASD. Maximization of time is critical so that school counselors can continue to meet the needs of many students (Anderson, 2002; Paisley & McMahon, 2001), and so students can maintain classroom time to master standards and benchmarks across other curricular areas (Woodard, 2002). In this intervention, school counselors will meet with students several times (at least 5 times) over the course of one semester. For individuals with ASD, this intervention is fairly brief, as individuals with autism often need services throughout their lifetimes (Happe, 1994; Rogers, 1996). Even so, in a previous study on preschool children with ASD, a 10-week intervention of therapy was shown to be effective for improving social communication behaviors (Vismara, Colombi, & Rogers, 2009). Nine to ten weeks is the average time spent on video modeling interventions (Bellini & Akullian, 2007). It is important to determine if this type of brief intervention can be effective, and appropriate for counselors to use with students with ASD in school settings.
Summary

Autism Spectrum Disorders were rare disorders at one time, but recent epidemiological studies verify that these disorders are much more prevalent today. The specific developmental issues present with this disorder, including stereotyped behavior, and communication and social delays, often require school-based interventions. So, schools need to be responsive to these needs by offering research-based interventions to support students with ASD with their presenting concerns. Three interventions, Social Stories™, video modeling, and the combination of Social Stories™ and video modeling, have strong support in clinical settings. Potentially, school counselors could deliver these interventions to students with ASD to support their social development in individual and small group counseling settings. The focus of this study is to examine the combination Social Stories™ and video modeling intervention by looking at multidisciplinary team members’ perception of it. Since multidisciplinary team members often decide which interventions are used to meet the needs of these students, their perceptions of the strengths and weaknesses of this combination intervention are important to explore through this qualitative study.
CHAPTER III
METHODS

The intent of this study was to investigate the perceptions of educational multidisciplinary team members (school counselors, parents, teachers) regarding the combination Social Stories™ and video modeling intervention for the development of social behavior in students with Autism Spectrum Disorders (ASD). School personnel or parents/guardians refer students to multidisciplinary teams for support. Then, multidisciplinary teams define their presenting problems, and then select research-based interventions to remediate these presenting concerns. After the intervention is prescribed, data are collected and the team determines if the student is making adequate progress with the intervention, or if alternative options should be implemented. Since multidisciplinary team members are involved in the selection, implementation, and appraisal of these interventions, their perceptions of these interventions are of particular importance for the pragmatic use of them in school settings. In this study, the intervention was prescribed by the researcher; however, the intervention was delivered by school counselors in the study, and data were collected by the school counselors and teachers. The perceptions of the combination Social Stories™ and video modeling intervention shared by the multidisciplinary team made up of teachers, parents, and school counselors compose this Qualitative Criticism.

As mentioned, the researcher, rather than the multidisciplinary team, selected to use the combination Social Stories™ and video modeling intervention in this study. School counselors participating in the study received training to be able to deliver this intervention competently. This training was delivered in one day, and included information on autism spectrum disorders, and the combination Social Stories™ and video modeling intervention (see Appendix D for an outline of the training). Then, school counselors worked with each student participant in counseling sessions using the interventions in combination. Pre- and post-assessments were used to determine if
improvements in social skills were achieved. The school counselors were then asked to comment on the Questionnaire for Counselors (Appendix I) as to how each of them used the training with students in their comprehensive school counseling programs. Teachers of the student subjects receiving counseling interventions completed the Vineland-II Teacher Rating Forms (V-II TRF) about the student before and after the interventions were delivered. After the interventions were completed, parents of the students, teachers who completed the V-II TRF, and the school counselors who delivered the interventions, were asked to complete questionnaires (see Appendices F, G, and H) about the interventions and their use with students diagnosed with an ASD. Using a Qualitative Criticism lens, the parents’, teachers’, and school counselors’ perceptions were analyzed using a multiple case study design with cross case analysis. In this chapter, the researcher discusses the rationale for using qualitative criticism methodology, details the research questions, explains how theory was derived from the data, describes the role of the researcher and the participant groups, and chronicles the data collection methods and analysis used throughout the study.

### Qualitative Methods

Qualitative research is grounded in constructivism (Guba & Lincoln, 1985). Qualitative research is used when the researcher intends to describe a complex social situation or human phenomenon in which contextual factors are meant to be captured, rather than teased out of the problem. As Taylor and Bogdan (1998) write, qualitative methodology “looks at settings and people holistically” (p. 8), and yields descriptive data from which theory is derived inductively. These qualitative methods are often used in field research to create an understanding of how theory can be found in practice or natural settings (Alexander, 2006).

In the natural setting of the school, variables such as curricula, students’ schedules, support services, and peer interaction are difficult to control. Qualitative research methods allow for these contextual factors to be a part of the case description,
which is particularly important with the ASD population, which tends to have highly varying educational needs. Therefore, the context surrounding the student subjects may be an important part of understanding each case. Contextual factors also helped this researcher to conceptualize how the instructional interventions were used, or assisted in understanding the adult participants’ evaluations of the interventions for the social development of students with ASD. In this study, it was important to examine each case holistically with a Qualitative lens.

**Qualitative Criticism**

Qualitative Criticism (QC) combines methods of qualitative research with educational criticism and connoisseurship (Swartz, 1993). After a period of time in which the researcher gathers extensive amounts of qualitative data, the researcher hopes to develop theories that emerge from these data in typical qualitative methodology. In contrast, the focus of educational criticism and connoisseurship is to appraise an event or object from the point of view of an experienced critic. Qualitative Criticism combines qualitative methodology with educational criticism and connoisseurship, so the focus of QC is to look at the entire context of a specific event or object from the perspective of the educated “or enlightened” connoisseur (Swartz, p. 4). This connoisseur is somewhat of a critic, in that a judgment or interpretation of the educational materials or curriculum is expected. The purpose for using qualitative criticism in education is “to describe, interpret and evaluate instruction” (Swartz, p. 1), and it involves looking at a particular event in context. It is an appraisal of instruction and curricula by stakeholders in the system of practice who use them. QC relies on the subjective expertise of the critic to educate others about the strengths and weaknesses of the instructional practice. While the combination intervention in this study is not an instructional practice per se, the concept of using Qualitative Criticism has been extended for use in this study to educational interventions.
In the Merriam Webster Dictionary (2011), criticism is described as an “unfavorable observation or remark”, in essence, a negative judgment or assessment of an object or an event. However, educational criticism and connoisseurship, which is integrated into QC, is not necessarily a negative commentary, but rather an “illumination” of an object or event (St. John, 1985, p.1). Illumination occurs when the objects or events are described, interpreted, and evaluated through the subjective lens of those who are experiencing them (St. John). The subjective lens in Qualitative Criticism is unique in that the researcher has acquired a special appreciation for the subject matter because of the specific education, training, and experiences the researcher has attained. Therefore, the researcher acts as a connoisseur, who is able to critically examine the subject matter from a knowledgeable perspective. Thus, the intention of qualitative criticism is to educate others or provide alternative views of an object or an event to expand the way others view them.

It is important to note the role of the critic in Qualitative Criticism. Swartz (1993) writes, “The critic is interested in the context of the event, the intent of the producer, and the effect of the object or event upon other people in a specific context” (p. 5). The critic uses his or her connoisseurship, or experienced appreciation, to disclose to the public his or her perceptions of the object or event (Eisner, 1985). In this study, the researcher will collect the appraisal of the interventions from the multidisciplinary team members enrolled in the study. This researcher will document their perceptions and analyze them regarding the intervention. Then, the researcher as critic will examine the perceptions of the multidisciplinary team members from her subjective lens. So, Qualitative Criticism is a two-tiered, systematic process of examining various viewpoints: first from the multidisciplinary team members, and then again from the researcher.

The multidisciplinary team members’ (i.e., the parents, teachers and school counselors) perceptions are based on their assessment of the social skills interventions (the event) intended to affect the social development of students with ASD in schools.
Each of these multidisciplinary team members has specific knowledge and expertise that allows them to contribute experienced perspectives regarding how the intervention impacted students with ASD in the study. Since the multidisciplinary team members play a part in shaping the intervention, and consequently, the student outcomes, they cannot separate themselves from the context of the intervention. So, their comments are value bound and subjective. Their values, attitudes, experience and skills will have an effect on their perceptions (Swartz, 1993). The perceptions of these multidisciplinary team members may differ because parents, teachers, and school counselors serve diverse roles in the intervention process, and may have varied values, attitudes, knowledge, and skills. This range of perceptions from the multidisciplinary team members gives the critic a holistic depiction of the strengths and weaknesses of these interventions to examine.

**Role of the Researcher**

In this study, the role of this author (the primary investigator) involved three components: researcher, instructor, and critic. First, my role as researcher was to design the study and recruit participants. The original design of the study was quantitative, so recruitment of participants included several methods. The primary method involved working with The Autism Society of America (ASA) chapters in Iowa. The Autism Society of America was originally founded in 1965 by Dr. Bernard Rimland and Dr. Ruth Sullivan to educate, support, and advocate for individuals with ASD (Autism Society of America, 2011). Today, it has grown to a national organization with regional chapters across the United States. Iowa has established four of these chapters. Before this researcher contacted Iowa chapters directly, an email correspondence was made to the national chapter representative to determine appropriateness of requesting participation in research of members and their families, and proper protocol in gaining entry to these chapters (R. Jochum, personal communication, December 17, 2009). After contacting chapter presidents of all of the chapters in Iowa, this researcher presented at two chapter meetings about the study to parents and primary caregivers. Some chapters do not meet,
but rather support each other through web-based communication tools. These chapters distributed the information in a brochure about the study through these tools. In addition, a brochure for this study was sent to all Iowa members of ASA as a part of the ASA regular e-newsletter. Emails were also sent to Iowa’s Area Education Agency Autism Teams, as well as the Iowa School Counselor Outreach, Research and Education listserv (ISCORE), developed by the Iowa School Counselor Association (ISCA). This researcher also presented at the Iowa School Counselor Association (ISCA) Annual Conference in Des Moines in October 2010 about the interventions, which drew some interest from school counselors preceding the study. Some parents contacted this researcher after hearing about the study from other parents of children with ASD. In general, parents shared their enthusiasm for the opportunity for their children to be involved in the study, and to receive the intervention. Some school districts and school counselors were more hesitant to be involved because of the time commitment and other precipitating factors.

Parents could not simply decide if they wanted their children to get these interventions in schools. If they were interested, school districts had to also agree to be a research site for the study, which meant completing necessary paperwork, allowing their school counselors to attend the training, and take the time during the school day to deliver the interventions. As mentioned previously, some school districts denied parents and researchers requests to engage in the study. Several parents felt aggravation and disappointment with their school districts, and shared these concerns with this researcher when their children could not receive the interventions as a part of the study because of school-based decision-making. These parents whose children could not be a part of the study not only wanted the intervention for their children, but also wanted their views to have bearing on these decisions.

When school counselors and school districts consented to being a part of the study, school counselors attended a one-day training. In the role of instructor, this researcher created the plans for the training (see Appendix D), and delivered the training
to the school counselors. The training involved an overview of the needs of students on the autism spectrum, a discussion of myths and facts about the disorder, and a video clip of Temple Grandin (TED.com, 2010) explaining how people on the spectrum think differently. Then, the school counselors were taught to write Social Stories™ using information this researcher obtained from a training led by Carol Gray (2009). The school counselors also learned how to integrate Social Stories™ into an online cartoon-formatting tool. Finally, three types of video modeling were introduced to the counselors: video modeling, video self-modeling and point-of-view video modeling (Bellini & Akullian, 2007; Bellini, Akullian, & Hopf, 2007). Examples were shown and school counselors were given time to discuss how they would use these interventions with the student subject as stand-alone interventions and in combination. For this study, though, the school counselors were asked to use the Social Stories™ and video modeling interventions as a combination intervention with the student subject.

To critique the combination intervention, this researcher used a qualitative criticism lens. In qualitative criticism, the researcher as critic must be able to look at the context of the event, the intentions of the producer, and the effect upon the subject. In this study, it was important for the critic to describe each school district, the roles of the adult subjects who completed the questionnaires, and how individual roles may affect their perceptions of the intervention for the student subjects. The critic must also explain how the criticism may be influenced by her own experiences. In this case, the researcher as critic has been an educator for 19 years. Through these years, the researcher was a high school English teacher, then an elementary counselor with a Master’s degree in School Counseling, and finally an assistant professor with doctoral work in Counselor Education and Special Education. The researcher has also been a parent for 17 years, and a sibling of a person with a disability for 17 years. In these educational experiences, this researcher has worked directly with a number of students on the spectrum, consulted with parents about their children with ASD, and has facilitated literally hundreds of multidisciplinary
team meetings in K-12 schools. In addition, the researcher has presented at state and national conferences on autism, and attended advanced trainings such as the Social Stories™ training (Gray, 2009) and the Belin-Blank Center Advanced Leadership Institute on Twice Exceptionality (2010). However, this researcher is not a parent of a child with autism, but is a stepparent of a child with a disability. Because of all of these background experiences, this researcher is considered to have extensive experiences in education, and in particular, students with disabilities.

Eisner (1985) suggests that extensive experiences make one an enlightened connoisseur. An enlightened connoisseur has the ability to perceive “what is subtle and important” (p.219) in the evaluation of the object or the event. The experiences of the researcher can certainly shape how the data from the participants is seen, so the qualitative criticism will be a co-construction of the shared perspectives of the adult subjects and the researcher as critic. For this purpose research questions were developed.

**Research Questions**

The following research questions guided the methods of investigation, and were used to create the questionnaires that were given to the school counselors, teachers, and parents involved in the study.

1. How does the combination Social Stories™ and video modeling intervention meet the needs of students diagnosed with Autism Spectrum Disorders in schools?
2. How does the combination Social Stories™ and video modeling intervention have the potential to meet the needs of students diagnosed with Autism Spectrum Disorders in schools?
3. What are the strengths and weaknesses of the Social Stories™ intervention for meeting the needs of students with ASD?
4. What are the strengths and weaknesses of the video modeling intervention for meeting the needs of students with ASD?
5. What are the strengths and weaknesses of combining the Social Stories™ and video modeling interventions for meeting the needs of students with ASD?

6. How can the combination intervention be used by school counselors in their comprehensive school counseling programs?

7. How has the combination intervention affected the social behavior of students diagnosed with Autism Spectrum Disorders?

**Participants**

To answer these research questions, several participant groups were recruited to participate in the study. Participants heard about the study in three ways: through Autism Society of America chapter meetings, through word of mouth, or through phone calls made to school counselors and parents who were identified through the Demographic Questionnaire. Parents of students with ASD were asked to enroll their children in the study, and then they were asked to share their perceptions of the combination intervention. School counselors were recruited to deliver the interventions to students diagnosed with ASD, gather the Vineland-II Teacher Rating Forms (V-II TRF) from the teachers, and respond to a questionnaire about the intervention. Teachers were invited to complete the Vineland-II Teacher Rating Form before and after the intervention, and then they were also asked to comment on their perspectives of the combination intervention. So, various perspectives about the interventions were collected from these participating multidisciplinary team members. These team members included student subjects, parents, school counselors, and teachers, who were given pseudonyms for identification in this study (see Table 1).
Table 1. Participants by Role and Pseudonym

<table>
<thead>
<tr>
<th>Role</th>
<th>Daniel, Age 5</th>
<th>Flynn, age 8&lt;sup&gt;^&lt;/sup&gt;</th>
<th>Brennan, age 9</th>
<th>Caleb, age 10</th>
<th>Andrew, age 11</th>
<th>Eric, age 13</th>
<th>Total/Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent</td>
<td>Mr. David</td>
<td>Mrs. Carter*</td>
<td>Mr. Key, Mrs. Key</td>
<td>Mrs. Gray</td>
<td>Mrs. Adams</td>
<td>Ms. Light</td>
<td>6</td>
</tr>
<tr>
<td>Teacher</td>
<td>Ms. Young</td>
<td>Mrs. Foster*</td>
<td>Ms. Hart</td>
<td>Mrs. Craig</td>
<td>Mrs. Russo</td>
<td>Mrs. Moe</td>
<td>5</td>
</tr>
<tr>
<td>School Counselor</td>
<td>Mrs. Danforth</td>
<td>Mrs. Farmer</td>
<td>Ms. Bell</td>
<td>Ms. Williams</td>
<td>Ms. Abbey</td>
<td>Ms. Black*</td>
<td>5</td>
</tr>
</tbody>
</table>

<sup>*</sup> did not complete Questionnaire

<sup>^</sup> Vineland-II Teacher Rating Form not completed post-intervention

The Recruitment Process

The recruitment process was complex as it involved several steps. It included: 1) finding families with a child with autism, presenting information to them about the study, and getting informed consent forms signed and returned; 2) contacting the potential participants’ school counselors to determine if they were willing to participate in the study; 3) contacting respective school districts superintendents to determine if they would agree to the study in their district, collecting letters of agreement from these superintendents, and completing all steps required by the district to participate; and 4) sending questionnaires to teachers, parents, and school counselors of the students with a letter including elements of informed consent.

Contact with the families was initiated through the Autism Society of America chapters. Marshall and Rossman (1999) argue that research design should include “a plan to negotiate access through formal and informal gatekeepers in the organization” (p. 80-81). Formally, an email correspondence was sent to the national Autism Society of America (ASA) organization explaining the study and asking permission to initiate contact with chapter leaders in Iowa. Permission was granted (Jochum, personal communication, 2009). Then, leaders of ASA chapters in Iowa were contacted. The study
was explained to them, and then the chapter leaders shared their suggestions for gaining access to potential participants. This researcher chose this method for two reasons: practicality, and to adhere to typical qualitative methodology. Regarding practicality, because of the Family Education Rights and Privacy Act (FERPA), this researcher could not access families of students with autism easily through the schools. As far as adherence to qualitative methodology, various viewpoints are encouraged in qualitative design (Taylor & Bogdan, 1998), such as those of the parents. The most impacted, yet the most marginalized groups are regularly given voice in qualitative research (Taylor & Bogdan). By initiating contact with the parents, they are given the first chance to decide and advocate for what they would like for their children educationally, and can share the impact of those decisions through this study.

The Autism Society of America chapters are staffed primarily by families. Two chapters allowed this researcher to present to their chapter meetings; the East Central Iowa Chapter President scheduled a presentation for a regular meeting of parents and caregivers, while the Quad Cities Chapter President invited this researcher to present the study to their operating board. Some chapter presidents discussed the inundation of research requests from other researchers, and preferred to maintain meetings as support group events. Other chapters do not meet in person, but have an established communication network. Each of these other chapters was willing to share my brochure with their members. Some members who contacted this researcher mentioned that they had heard about the study from other parents of children on the autism spectrum. Through this three-month recruitment process, more than 50 families contacted this principal investigator about the study. Twenty-nine of these families completed the informed consent paperwork and the demographic information sheet.
Site and Sample Selection

Sites for the case studies were primarily based on interest of parents of student subjects, and the subsequent cooperation of school districts. This convenience sample was generated in the following ways.

Students. Students receiving the interventions were identified for participation in the study based on their parents’ decision to enroll them. The students were not eligible to give informed consent or assent because of their ages and their developmental disabilities. After parental informed consent was given, this researcher determined if the students met inclusion criteria based on information parents reported on the Demographic Questionnaire (see Appendix F). The primary criterion for participation in the study was a diagnosis of an Autism Spectrum Disorder. Therefore, parents or guardians of student participants in this study had documented on the Demographic Questionnaire that their child had been previously diagnosed with Autistic Disorder (AD), Asperger’s Syndrome (AS), or Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS). Students with Rhett’s Disorder and Childhood Disintegrative Disorder were not included in this study because of the developmental regression associated with these disorders (DSM-IV-TR, 2000).

Other qualifying criteria for participant inclusion in the study were (a) enrollment in an elementary or middle school as a student in one of the pre-Kindergarten through 8th grades, (b) placement with a regular education homeroom teacher for part of the day, (c) the opportunity for social interaction with peers of the same age for at least one hour per day, (d) enrollment in a school in which a school counselor or a social worker hired to act in the role of the school counselor is employed, and (e) parental consent to participate in a school-based counseling social skills intervention over the course of a semester, including assessments before and after the intervention.

These inclusion criteria are important for several reasons. Elementary and middle school students are the focus of this study because of the importance of early intervention
for individuals with ASD (AutismFACTS, 2006; Happe, 1994; Rogers, 1996). Placement with a regular education teacher for part of day with same age peers allows for social interaction with typical functioning peers for assessment purposes, as well as opportunities for practice and use of the social skills. Classroom teachers were asked to participate in the study if they had the student subject in their classroom. Since the study focuses on the role of the school counselor with this population, a school counselor had to work with the student for the intervention. Finally, a criterion needed for inclusion was parental consent to protect the rights of the children in research studies and to give parents the right to determine the best educational options for their children.

Criteria for exclusion from the study included (a) current participation in another intervention for social skills development outside of regular classroom activities, (b) being younger than 5 years of age, or older than 13 years of age, or (c) having a significant health concern (e.g., Fragile X, Down syndrome, cerebral palsy) that may interfere with completion of the intervention. Elementary and middle school aged students were chosen because of a higher likelihood that one teacher would have students for a long enough period of time to adequately assess social behavior. All of these exclusion criteria were necessary to avoid confounding of the data in regard to overlapping interventions, health issues that could have impeded completion of the intervention, or variability in the participant sample. Twenty-nine cases met the inclusion and exclusion criteria. Of these, the researcher was able to gather consent from parents, counselors, and school districts in ten of these cases. In most of the other cases, school district administrators cited counselor overload and district research policy as reasons for not allowing the study in their schools. In two of the cases that were not included in this study, the school district would not allow the school counselors to deliver the study in the school. Parents were able to advocate for the intervention to be delivered to their children by school district personnel other than counselors (e.g., special education teachers, Area Education Agency specialists) so they were able to receive a similar intervention, but
could not participate in the study since the intervention was not delivered by school counselors.

Ten school counselors attended the training for Social Stories™ and video modeling interventions. Four cases were lost during the course of the intervention due to inability to consistently deliver the interventions. In most cases, this involved complications in the school counselors’ and students’ schedules. Six cases were able to complete the study in its entirety.

Parents. As mentioned in the recruitment process, this researcher was able to identify a convenience sample by accessing parents of children with ASD through their local Autism Society of America (ASA) chapters. Four of the six participating cases were enrolled at ASA meetings after this researcher presented about the study. The other two cases were enrolled after their school counselors read about the study through the Iowa School Counselor listserv (ISCORE), and asked the parents if they would like to participate. Parents of students with autism spectrum disorders were very eager to enlist their children in this study. Initially, 54 parents contacted this researcher about the intervention. However, many were not able to participate for reasons outside of their control. Some school districts would not allow for their personnel to be involved in the study, citing that the research was not in line with their school’s goals, or their school counselors had demanding work schedules and did not have the time to take part in the study. After schools declined participation, some parents continued to advocate for their children to receive this intervention by calling or meeting with school superintendents, by calling media to share their stories, or by signing petitions. Eventually, some parents were able to get the interventions through their school district, but were not allowed to participate in the study because personnel other than school counselors were assigned the role. Other parents simply were not able to obtain the intervention for their children.

Trust and rapport was established with the researcher by meeting with potential parent participants after meetings, listening to past and present concerns about the
education of their children, and answering questions about the study via email or phone. Interested parents whose children were able to be involved completed informed letters of consent (Appendix E) and the Demographic Questionnaire (Appendix F) about their children, which included items to document their child’s diagnosis and diagnosing health care provider to determine eligibility for the study. After the intervention was completed, the parents were mailed the Questionnaire for Parents and completed it at their convenience (see Appendix G). These questionnaires were returned in self-addressed stamped envelopes to the researcher. After the questionnaires were returned, the parents received the results of the V-II TRF for their children.

*Teachers.* The primary researcher also enlisted the assistance of classroom teachers through recommendation of the parent and/or school counselor. The classroom teacher was responsible for monitoring the social behavior of the student with ASD, whom they had in their classroom for at least one hour a day (or one period of the day) during the spring semester of the year of the study. These teachers were asked to complete the Vineland-II Teacher Rating Form (VII TRF; Sparrow, Cicchetti, & Balla, 2006) two times on one student with ASD in their classroom. The data from the V-II TRF were used as a method of triangulation; that is, to compare and contrast to the qualitative data provided on the questionnaires. First, the teachers were asked to complete the V-II TRF before the school counselor delivered the intervention. Then, the same teachers were asked again to complete the V-II TRF within one week after the last session of the intervention. The same teacher was asked to complete both forms to increase the internal reliability of the V-II TRF. After the intervention and completion of both forms, the teachers were emailed and were then asked to complete the online Questionnaire for Teachers about their perceptions of the intervention (see Appendix H).

*School Counselors.* Cooperating in the study were elementary and middle school counselors willing to individually counsel the student participants during one school semester. Typically, the school counselors’ names were provided by the parents on the
Demographic Questionnaire. Some school counselors heard about the study and contact the researcher. Then, the researcher was able to get informed consent forms signed and Demographic Questionnaires filled out through the school counselors who contacted the parents. All of the cooperating school counselors attended a one-day professional development training on interventions for students with autism before delivering the intervention. The training, offered and led by the primary researcher, focused on Social Stories™ and video modeling (Scattone, 2008). School counselors in practice rather than researchers or clinicians facilitated the counseling intervention in the natural, school setting so that they could render an experienced opinion and to decrease the “participantness” of the researcher (Marshall & Rossman, 1999, p. 61). This method was also the least intrusive to the student subjects, and offered a way for this researcher to reciprocate the school counselors’ time with free training on interventions for students with ASD. The school counseling interventions could be used with other students after completion of the study.

These trained school counselors were asked to use the interventions together in their counseling sessions with the students with ASD. The school counselors documented how they used the interventions in combination with the respective student participant throughout the semester. School counselors were asked to consult with parents and teachers, and identify and target specific social skills that were helpful to improve the students’ social behavior in schools. These targeted skills were unique to each student subject based on their presenting concerns and the expectations of the school. The length of time spent on a particular skill and the number of times the counselors met with the student participant also varied. So the frequency, intensity, and duration of the combination intervention depended on the needs of the student and other precipitating factors related to the students’ schedule and the school counselor’s other assigned duties. All counselors met with their respective student subjects at least five times over the course of the semester. After the intervention was completed, the school counselors
mailed the Vineland II Teacher Rating Forms and a record of the use of their interventions to the researcher. Once the intervention materials were received, the researcher mailed the Questionnaire for School Counselors (see Appendix I) to them, along with a letter containing elements of consent (Appendix L). The school counselors were asked to mail the Questionnaire for School Counselors to the researcher in a self-addressed stamped envelope after completion.

**Data Collection Methods**

Data were collected using multiple qualitative methods. Qualitative researchers suggest using multiple data collection methods (Marshall & Rossman, 1999) and multiple sources of evidence (Yin, 2009) to strengthen the study by compensating for the limitations of one method or one source of evidence. A review of documents was completed to create a description of the school settings of each case. Parents of the student subjects also completed Demographic Questionnaires allowing the researcher to create a depiction of the student receiving the intervention in each case. These student participants’ socialization skills and overall adaptive behavior were assessed before and after the intervention using the Vineland Adaptive Behavior Scales – II, Teacher Rating Form (Vineland-II; Sparrow, Cicchetti & Balla, 2006). After the intervention, multidisciplinary members completed questionnaires to provide commentary on the combination Social Stories™ and video modeling intervention. Each of these methods is described in detail below.

**Demographic Questionnaire**

Questionnaires are often used in qualitative researcher to learn about characteristics of a sample of a population (Marshall & Rossman, 1999). In this study, a Demographic Questionnaire was created to gather specific information about the student subjects from their parents (see Appendix F). The Demographic Questionnaire included basic fill-in-the-blank items to initiate and maintain contact with potential subjects’ parents and schools. Other items in checklist format were used to determine if the
potential student subjects met inclusion or exclusion criteria, and to gather information about the student’s school program. Open-ended questions followed to identify social skill deficits that could possibly be developed through the social skills interventions.

**Research Questionnaires**

In addition to the Demographic Questionnaire, questionnaires for each of the adult groups of participants were developed. These questionnaires incorporated questions drawn directly from the research questions of this study. Parents were sent a letter containing elements of informed consent (Appendix J), and were asked to complete the Questionnaire for Parents (Appendix G). The Questionnaire for Parents incorporated five open-ended questions drawn directly from the research questions of the study. The purpose of these five questions was to elicit thick description from the parent participants regarding their perceptions of the social skills interventions that were delivered to their children. A sixth question was added to offer the parent participants to share any information that did not fit with the previous five questions.

The participating teachers were also sent an email containing elements of consent (Appendix K) along with the Questionnaire for Teachers (Appendix H), which used the same questions as the Questionnaire for Parents. The school counselors’ letter containing elements of consent can be found in Appendix L. The Questionnaire for School Counselors (Appendix I) asked the same questions as the other two questionnaires for adult participant groups with additional questions regarding the school counselor’s comprehensive school counseling program. Questions in common across all three questionnaires were important to create internal reliability related to the questions of the study. In addition, the three sets of questionnaires allowed the researcher to determine similarities and differences among the three adult groups from which grounded theory can be analytically induced (Taylor & Bogdan, 1998). The additional questions in the Questionnaire for School Counselors were included to describe how the training had affected their work with or for students with Autism Spectrum Disorders. These
questions permitted the researcher to add comment specific to school counselors who are the primary audience of this study. This questionnaire also gave school counselors a voice to inform researchers about future trainings and studies for school counselors working with the ASD population.

**Vineland-II Teacher Rating Form**

The Teacher Rating Form of the Vineland Adaptive Behavior Scales, 2nd Edition (Vineland-II; Sparrow et al., 2008) was used to collect pre- and post-data on the student participants. The intention of using V-II TRF data was to triangulate this data with the data from the qualitative questionnaires completed by the multidisciplinary team members. As such, the V-II TRF allowed the researcher to look at the results of the interventions in another way. The Vineland-II (Sparrow et al., 2008) is a comprehensive assessment of social and personal functioning for individuals, ages 3-21, to be used in structured settings such as schools and daycares. Teachers and other care providers completed the Teacher Rating Form section (V-II TRF) to assess three of the four domains of Communication, Daily Living Skills, Socialization, and Motor Skills. It is appropriate in this study to disregard the Motor Skills scale since it is recommended for use with children 6 years old and younger, and it does not directly relate to social skill development. An Adaptive Behavior Composite score was calculated using the sums of each of the domains to obtain a measure of overall adaptive functioning. The researcher calculated all scores, including the composite score, by following the Vineland-II scoring protocol manual.

The validity and reliability of the Vineland-II TRF were other considerations that were taken into account when analyzing the scores. Internal consistency of the Vineland-II (Sparrow et al., 2008) sub-domains is high (83% of the sub-domains have a .85 coefficient). Since teachers rated students three times over a span of 15 weeks, test-retest reliability was especially important to this study so as to avoid confounding the data collection. The manual reported that this measure has high test-retest reliability between
“ratings of about 3 weeks” (“sub-domains coefficients are in the mid-80s; composite reliability is .91”; Sparrow et al., 2006, p. 81). The Vineland-II Teacher Rating Form Manual (Sparrow et al., 2006) provided evidence of content, construct and criterion-related validity as well.

The Vineland-II was also an appropriate scale to use with the ASD population for the following reasons. The Vineland-II was designed to be sensitive enough for diagnosis of Pervasive Developmental Disorders, and is discrete enough to differentially diagnose within this group of disorders (Sparrow et al., 2008). Further, items were added to the Vineland-II that were not in the original Vineland Adaptive Behavior Scales to assess adaptive behaviors expected of students with developmental delays who are in inclusive settings. Norms are available for comparison to neurotypical individuals and to individuals with Pervasive Developmental Disorders.

Often, the results of psychological assessments are used in multidisciplinary team meetings to determine if interventions are effective or not (Sugai & Horner, 2009). In this study, the researcher used data from the V-II TRF to examine the effectiveness of the combination intervention as compared to the appraisals of the intervention by the multidisciplinary team members. Essentially, the multidisciplinary team members (i.e., the parents, teachers and school counselors) perceptions the student subjects showed changes in social behavior after the intervention. This information was used in the critical analysis of the combination intervention. Adult participants were not aware of the results of the assessments before they completed the group-specific questionnaires. The assessments are utilized as a way to triangulate the subjective data from the qualitative questionnaires. The data from the V-II TRF were also applied in an exploration of the similarities and differences between findings of the psychological assessment and the multidisciplinary team members’ perceptions of the social skills intervention.

**Research Design**
The design of this study was intended to facilitate the collection of data to answer the research questions previously mentioned in this study. The researcher used qualitative design for this study, using Multiple Case Study and Qualitative Criticism strategies.

**Multiple Case Study Design**

The case study is one method of qualitative research (Yin, 2009). The case study may be used when behaviors of the subjects cannot be manipulated or the experiment cannot be controlled across sites, and when the focus is on contemporary rather than historical events (Yin). Methods for gathering data in case studies include examining documents, completing observations, conducting interviews or using questionnaires (Yin). Multiple case study designs allow researchers to either replicate findings across cases, or determine identifiable distinctions or differences among cases that can be predicted by theoretical explanations (Yin).

**Unit of Analysis**

In this multiple case study, there were six cases or units of analysis. Each case revolved around the student subject diagnosed with ASD, and the student’s multidisciplinary team, which included the parent or parents of the student, a teacher of the student, and the school counselor of the student. Each of these members of the multidisciplinary team was asked to complete a questionnaire sharing his or her perceptions of the combination Social Stories™ and video modeling intervention after this intervention was delivered to the student. In addition, the parent completed a Demographic Questionnaire about their respective student, and the teacher completed a Vineland-II Teacher Rating Form about the student before the intervention began and after the intervention ended to triangulate the qualitative data.

Each of these evaluations about a particular student subject, identified as a case, could be analyzed alone. By comparing the six cases of study in the cross case analysis, the researcher was able to identify themes across cases, which provided more information about the practicality of using the interventions with the ASD population in schools.
Within Case Analysis

Within each case, analysis followed Marshall and Rossman’s analytical phases (1999), which included organizing the data, generating themes and patterns, coding of the data, determining emergent theories or propositions through testing, completing a search for alternative explanations, and producing a written report of the findings (p. 152). After the data were organized by case, themes about the delivery of the Social Stories™ and video modeling intervention by the school counselor were generated based on data from the parent, teacher, and school counselor for each case. Then, the researcher identified themes collectively from all three participant groups in each case, and data were coded according to the identified themes. Propositions or themes that emerged were tested by searching for alternative or disparate explanations. Then, a critical analysis of the interventions was written based on each case.

The researcher used the analytic technique of Pattern Matching (Yin, 2009) to generate themes and patterns from the data. Pattern matching involves “comparing empirically-based patterns to predicted ones” (p.136). Specifically applied to this study, the researcher looked for patterns of strengths and weaknesses of the Social Stories™ and video modeling interventions. In addition, the researcher looked for patterns related to what makes these social skills interventions useful or not useful for students with ASD. School counselor participants also were given an opportunity to share their perceptions of the autism training and how it affected their work with students on the autism spectrum as a part of their comprehensive school counseling programs.

Student participant scores from the Vineland-II TRF were collected before and after the intervention. These assessment scores reflect changes in each of the participants’ overall adaptive functioning, as well as changes in the areas of communication, daily living skills, and socialization. Sub-domains that are of particular interest to the study assessed by the Vineland-II include expressive communication, daily living skills in the school community, interpersonal relationships, play and leisure time socialization, and
coping skills. These scores were utilized along with the data from the questionnaires to critically analyze the social skills combination intervention. VII-TRF scores were used to support or challenge multidisciplinary team members’ critiques of the social skills combination intervention, and were used to suggest directions for future quantitative studies in Chapter 5.

Cross Case Analysis

Multiple case designs are sometimes regarded as more compelling than single case studies (Yin, 2009) because they essentially replicate or dispel the findings of one case. Multiple case designs also allow the researcher to further refine propositions or themes that emerged from one case. In this study, the multiple case design allowed for analysis of themes by participant role. That is, the school counselor data were pooled together, as were the teacher data, the parent data, and the VII-TRF data, into four separate and distinct analyses. By looking at the interventions by role by using a cell matrix (Marshall & Rossman, 1999), the researcher was able to identify themes according to role, and then to compare and contrast these themes to other participant roles. So, the data from each row in the following chart were combined to identify themes based on the participants’ role (see Table 2). Then, the themes that emerged from each role were compared to other themes that emerged from other roles in the final analysis.

Table 2. Multiple Case Study Design Using Cross Case Analysis by Role

<table>
<thead>
<tr>
<th>“Daniel”</th>
<th>“Flynn”</th>
<th>“Brennan”</th>
<th>“Andrew”</th>
<th>“Caleb”</th>
<th>“Eric”</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Counselor 1</td>
<td>School Counselor 2</td>
<td>School Counselor 3</td>
<td>School Counselor 4</td>
<td>School Counselor 5</td>
<td>School Counselor 6</td>
</tr>
<tr>
<td>Teacher 1</td>
<td>Teacher 2</td>
<td>Teacher 3</td>
<td>Teacher 4</td>
<td>Teacher 5</td>
<td>Teacher 6</td>
</tr>
<tr>
<td>Parent 1</td>
<td>Parent 2</td>
<td>Parent 3a, 3b</td>
<td>Parent 4</td>
<td>Parent 5</td>
<td>Parent 6</td>
</tr>
<tr>
<td>VII-II TRF 1</td>
<td>VII-II TRF 2</td>
<td>VII-II TRF 3</td>
<td>VII-II TRF 4</td>
<td>VII-II TRF 5</td>
<td>VII-II TRF 6</td>
</tr>
</tbody>
</table>

^ not completed
Cross Case Synthesis

Cross case synthesis is another way to make a study more robust than using a single case (Yin, 2009). Using a method called pooled case comparison (West & Oldfather, 1995), raw data were taken from each case and pooled together in word tables to identify cross-case conclusions about the social skills interventions. As in the single case studies, Marshall and Rossman’s analytical phases (1999) were followed again to organize the data, then generate themes and patterns, code the data, and identify emergent theories or propositions. The theories that emerged from the pooling of the data in the studies were then compared to each individual case to refine the theoretical propositions. Again, rival explanations were entertained, and discussed in the written analysis in Chapter 5.

Trustworthiness

In the analysis of qualitative research, determining the trustworthiness of the data is paramount. Lincoln and Guba (1985) have identified four constructs that can be used by qualitative researchers to speak to the trustworthiness of the data that has been collected and analyzed. These four constructs are credibility, transferability, dependability and confirmability. In regard to credibility, the qualitative researcher attempts to develop an accurate depiction of the subject (Marshall & Rossman, 1999). Information in this study about the student subjects and the intervention being delivered to them was gathered from multiple sources (i.e., the parent, teacher and school counselor), who worked directly with the student to establish accuracy. The VII-TRF was also used to gather additional information about the student’s social development in a second way from teachers (i.e., in addition to the questionnaire) and to triangulate the data about the social skills interventions that were generated from the questionnaires completed by the adult participants.

The second construct of transferability focuses on how the information found in the study can be useful to others in practice (Marshall & Rossman, 1999). In this study,
variability exists in the age range of the student subjects, so the findings may be useful to educators and parents in Pre-K through 8th grade settings. In addition, this researcher examined the perspectives of several key stakeholders in schools about the social skills interventions. This examination intentionally included parents, who are at times told about the education of their children, rather than being asked for their expertise regarding their children (Billington, McNally, & McNally, 2000). The various perspectives involved in each case multiplies the transferability and usefulness for parents, teachers, and school counselors of students with ASD.

Dependability in qualitative research translates into attempts for the researcher to be responsive to the setting and participants in the study (Marshall & Rossman, 1999). Although there are only a few cases examined here, the researcher was careful to deliver the same training to all of the cooperating counselors, and to follow parallel processes in the procedures and study of each case. However, the school counselors were given direction to tailor the interventions to meet the needs of the individual student within the school system each student attended, and to consult with parents and teachers regarding the targeted behaviors.

Marshall and Rossman (1999) note that confirmability refers to the relationship among the data, general findings, and implications. In this study, a constant comparative method was used to test emerging concepts. In addition, theories and propositions were identified in individual cases, and then confirmed in other cases as a part of the multiple case study design. Rival explanations were considered and evidence that dispelled initial theoretical ideas was used to refine conclusions made about the perspectives of the multidisciplinary team members, and their views of the social skills interventions.

**Grounded Theory**

The grounded theory approach holds the basic premise that theory emerges from the constant comparison of patterns and themes across data (Marshall & Rossman, 1999). Grounded theory development surfaces from extensive review of the literature (Marshall
& Rossman), practice or immersion in the field and the data (Taylor & Bogdan, 1998), and convergence of evidence (Yin, 2009). All three of these methods were a part of the development of the themes in this study. Generally, grounded theory can stand alone as a qualitative strategy, but in this study, emergent themes were additionally explored through the lens of qualitative criticism. The following quote by Suddaby can explain the way in which grounded theory was used in this Qualitative Criticism.

In grounded theory, by contrast, interviews with subjects may start with a phenomenological interest in subjective understandings, but the primary interest is not in the stories themselves. Rather, they are a means of eliciting information on the social situation under examination. (Suddaby, 2006, p. 635)

In this study, the perceptions of the multidisciplinary team members were important to understand their particular points-of-view; however, they were also used to elicit information on the combination intervention examined in this Qualitative Criticism.

After more than 10 years of practical experience working with students with autism spectrum disorders and their families, facilitating multidisciplinary team meetings, and reading journals about this population and the particular interventions of study, this researcher created the study design. Once the design was created, the researcher also consulted with many families through visits and presentations at Autism Society of America meetings and intervention trainings, and conferred with school counselors at conferences, and other school counselor events.

Once the study was conducted and the data collected, the responses of each of the adult participants were organized by case in an Excel spreadsheet (©Microsoft, 2011). Responses were then coded. When a response did not fit an existing code, a new code was added. This is how the codes, and then themes emerged from the existing qualitative data. After the data were coded, the data were reorganized by multidisciplinary team member role (i.e., parent, teacher, school counselor), and question number. For example, all responses to question one of the Questionnaire for Parents were grouped. This method
was used for each of the question items, for the Questionnaires for Parents, the Questionnaire for Teachers, and the Questionnaire for School Counselors. This method allowed the researcher to identify common or disparate ideas for each question.

Then by question, the researcher identified the main ideas that the team members were trying to articulate. The main ideas that related to other ideas or permeated across questions were grouped into the themes that are discussed in the Findings of Chapter IV of this thesis. These thematic findings are used to compose the critical analysis used in this Qualitative Criticism.

**The Hybrid: Qualitative Criticism and Case Study Design**

Specific aspects of the two aforementioned forms of qualitative methodology were meshed: embedded multiple case study design, and qualitative criticism. Multiple case study design was used to examine the perceptions of the interventions as they pertained to each case, and to look across cases for themes that emerged based on each role of the multidisciplinary team members. Qualitative criticism was used to describe, interpret, and evaluate the social skills interventions that were delivered through the experienced lens of this researcher. So, by using this hybrid design, the researcher intended to describe how the interventions were used with each student subject, and then evaluate its usefulness for that subject through the perceptions of various members of that students’ multidisciplinary team. In addition, the data from each case were organized and pooled to examine the perspectives of each type of team member. All of the data were also compiled and re-analyzed to get a holistic perspective of the interventions in the final critical analysis.

**Assumptions**. Assumptions in Qualitative Criticism according to Swartz (1993) are the same as those Lincoln and Guba (1985) described in *Naturalistic Inquiry*. The five following assumptive axioms are:

1. Reality is seen as multiple, constructed and holistic.
2. Knower and known are interactive, inseparable.
3. Only time and context bound working hypotheses are possible.
4. All entities are in a state of mutual simultaneous shaping, so that it is impossible to distinguish causes from effects.
5. Inquiry is value bound. (Lincoln & Guba, as cited in Swartz, pp. 9-12)

The description of how these assumptions are applied to this study follows.

Axiom 1) Reality is seen as multiple, constructed and holistic. There are many ways an intervention can be viewed. Using broad, open-ended questions such as asking for the strengths and the weaknesses of the interventions, gave the adult participants the opportunity to determine their focus. Further, the open-ended questions allowed the participants to construct their perceptions based on what they valued or found important in the intervention (Arnon & Reichel, 2009). Since participants valued different characteristics of an intervention, reality as it was seen in multiple ways by the participants, created a holistic, co-constructed picture of the intervention when all of these perceptions were analyzed together.

Axiom 2) Knower and known are interactive, inseparable. This axiom suggests that the participants cannot be removed from the environment. In this case, the student subjects were not removed from the school environment they attended. Parents, teachers and school counselors, who are part of each school environment, contributed to the intervention as a function of the student subject’s life. However, the differences in the environments of the participants (e.g., school district, parental involvement) made each case unique. It is also important to note that the researcher was not separable from the study either. Because the researcher was involved in the training of the school counselors, initiated interactions with the parents and teachers, and analyzed the data from a qualitative criticism lens, the researcher along with the participants truly co-constructed the results and conclusions of this study.

Axiom 3) Only time and context-bound working hypotheses were possible. That is, qualitative criticism is based on the people, places, and situations (in this case, interventions) under investigation. They are context-specific, so the hypotheses and
theoretical propositions, which are derived from the data, are based on these particular students work with specific school counselors in each case. Therefore, the theory derived from these cases was grounded in the context or present state of them when the study was conducted.

Axiom 4) All entities are in a state of mutual simultaneous shaping, so that is impossible to distinguish causes from effects. In this study, the school environment and the home environment could not be controlled. Many interactions occurred at school and before and after each student’s school day that may have affected the social development of the student participants. As the study was being conducted, they were being shaped by all of those interactions around them in addition to the interventions being studied. So, the researcher could not determine the causes of the effects that are identified.

Axiom 5) Inquiry is value bound. As mentioned previously, what the adult participants chose to focus in their answers to the questionnaires was based on what they valued or found important in regard to the intervention. These values were bound to their experience, education, knowledge, skills, and attitudes. Therefore, the qualitative criticism functioned from the contextual perspectives of those involved in the study. This axiom also can be related to the values of honesty and integrity in the responses to the questionnaires. This researcher must assume that the interventions were delivered with integrity, and that comments made by the adult subjects on the questionnaires were truly their beliefs about the interventions being critiqued.

Limitations of the Design

One potential limitation of this design was practice or fatigue effects of the intervention; however, participants did not have to do the testing in this field experiment. Since they were not given multiple treatments, there was little concern about the participants’ fatigue effects regarding assessment in this study. There was more reason for concern for fatigue effects from the counselors who conducted the treatments or teachers who completed the assessments. School counselors may have had difficulty
sustaining the intervention over a semester considering their typical caseload. This fatigue effect may have affected the internal reliability of the intervention, which may have affected the outcomes of the participants’ skill development. Another similar concern was the teachers’ commitment to filling out the assessments with integrity. The teachers may have succumbed to practice effects as they became more familiar with the scales as they completed them, which may have affected or changed how they responded to them. This limitation was slight since the test-retest reliability of the Vineland-II mentioned previously is high. There was also the possibility that the teachers and/or parents of the student participant may have talked to the counselor about the assessments, which may have impacted their responses to the questionnaires as well. Finally, feelings about the student or the role of the school counselor may have biased how the teachers or parents responded to the questionnaires and the Vineland scales. For example, if a teacher had a particularly good or difficult day with a student, that may reflect in the teacher’s responses to the V-II TRF or the Questionnaire for Teachers.

Other limitations to this study related to the participants’ presenting concerns. The variations in presenting concerns with participants with autism make case study design appropriate, but make it difficult to compare cases. Although the units of study have had the common characteristic of an autism spectrum disorder, by nature of the disorder, the participants' heterogeneity in regard to their presenting social concerns is a limitation. Further, the school counselors’ usage of the social skills intervention training with the student was intended to provide flexibility to meet the needs of individual students. As the social skills intervention is critiqued holistically, it is important to recognize the interventions were not delivered using a particular protocol by the cooperating school counselors.

Finally, case studies are not generalizable to populations, so no broad or general conclusions can be drawn about the ASD population and these interventions. Case studies
and qualitative criticism allow for theoretical propositions to be applied or developed, and are transferrable to other cases (Yin, 2009).

**Summary**

The qualitative criticism methodology and multiple case study design and analysis fit well with the research questions asked in this study. The methodology allowed for contextual differences to be considered in a natural setting with a minimal amount of interference from the researcher. The multiple perspectives of multidisciplinary team members were considered and analyzed within each case and across cases by role. The multiple case study design also lent itself to multiple checks and balances as the theories emerged from the data and rival theories were considered. The qualitative criticism lens took into consideration the professional and personal experiences of the researcher in the analysis of the data, and the co-construction of the findings and conclusions. The emergent theoretical propositions of this qualitative criticism may be transferable to other cases involving students with ASD, but do not suggest any cause and effect, and must be considered within the context of cases written about in the next chapter.
CHAPTER IV
FINDINGS

As mentioned in the introduction, the personal insight of Temple Grandin, self-advocate for autism spectrum disorders, is of interest to many parents, teachers, counselors, researchers, and individuals diagnosed with Autism Spectrum Disorders (ASD). Dr. Grandin has been able to articulate what ASD means to her, and has subsequently been able to expand others’ understanding of the disorders by sharing her story. This Qualitative Criticism, which integrated multiple case study design, also intends to expand our understanding of the experiences of students with ASD. One way to illuminate our understanding of these students’ experiences, and to evaluate the interventions was to examine them by compiling the parents’, teachers’, and school counselors’ perceptions of the interventions through their subjective lenses. The findings shared here are descriptions of six case examples of students who have received the combination Social Stories™ and video modeling intervention from school counselors in their respective schools. The names of the students, parents, teachers, school counselors, and schools have been changed to pseudonyms to protect their individual identities and privacy.

In each of the six cases presented, the students are described in the context of the respective school at which they attended at the time of the study. Information about their diagnoses as well as their presenting concerns are included. Following the description of the student, the perceptions of the interventions from the point of view of each of the multidisciplinary team members (i.e., parents, teachers, school counselors) are expressed when they have been shared with the researcher. After each case discussion, themes that emerged from across team member groups are revealed. Finally, a cross case synthesis of themes has been presented, which includes an analysis of scores from the Vineland II Teacher Rating Scale. The Qualitative Criticism examining the social skills interventions
through the themes that emerged in this multiple case study is the content of the discussion in Chapter V.

The following are case descriptions of the students’ stories, and the respective perceptions of each of the multidisciplinary team members involved in that case in regard to the use of the combination social skills intervention with the particular student.

**The Case of “Daniel,” age 5**

**Student**

Daniel is a 5-year-old male student who attends a pre-Kindergarten class in the Deerfield School District. The Deerfield School District is a large rural district made up of several small towns, which have consolidated into one district with several school buildings. The district serves around 1800 students and employs 3 school counselors and 1.5 social workers to support student needs. Daniel’s father, Mr. David, attended an Autism Society of America chapter meeting, and was eager to sign Daniel up for the study after the principal investigator’s presentation. When the researcher contacted the superintendent of Daniel’s school district by email and by letter, no response was initially received from district personnel. The researcher then contacted Mr. David, who called the superintendent of the district to advocate for his son’s participation in the study. The superintendent then responded to the principal investigator’s letter. Because the school district is in close proximity to several postsecondary institutions, they receive numerous requests so the superintendent had originally put it aside. Because a parent was particularly interested in the study, and a school counselor was willing to participate, consent was given to conduct the study by the school superintendent.

Daniel attends school for a full day at Deerfield. He has an Individualized Education Plan (IEP) and a para-educator who was assigned specifically to Daniel for support during the school day. According to Mr. David, Daniel had been diagnosed with Pervasive Developmental Disorder, Not Otherwise Specified (PDD-NOS), by a team of specialists including a medical doctor and a psychologist before the study. For the study,
Daniel’s father requested that the school counselor work on reciprocating conversation and making eye contact. Mr. David also attached a typed note to the Demographic Questionnaire for the researcher. The note shared specific details about Daniel, including his “obsession with letters and numbers,” and his ability to read and spell words at a very young age. While Daniel can memorize movies and commercials after watching them once or twice, his father emphasized that Daniel needs to do things “over and over” to learn them.

Teacher

Daniel’s teacher, Ms. Young, shared her observations of him on the Summary of Observations section of the Vineland-II Teacher Rating Form both before the intervention and after the intervention. She noted that Daniel “knows a lot” academically, as he is able to “memorize his letters, numbers, shapes and colors” and is “good at figuring things out.” Daniel struggles socially. While he uses the same materials and does the same activities as other children in the class, he “does not know how to ask to interact with them.” He is also very dependent on his schedule and needs prompts from adults to complete tasks. According to Ms. Young, large group time is also a difficult time for Daniel, so they have begun integrating tactile stimuli to help him stay focused. In addition to the suggestions from Mr. David, Ms. Young suggests that he also needs to perform tasks on his own rather than relying on the para-educator for initiation of them. The school counselor used the combination Social Stories™ and video modeling intervention to attempt to meet this student’s social skills needs.

Regarding this intervention, Ms. Young also commented that the combination intervention gave Daniel multiple ways to learn the skill, as he could hear the skill first through the Social Story and then see the skill through video modeling. She also felt the images he watched were “motivational” for him, as they were “relatable” so he wanted to emulate them. Of both the Social Stories™ and the video modeling interventions in isolation, she felt that they “worked for some kids and not for others” but would
recommend to families to try each of them to see if either or both methods were good methods for their child. She had no critiques of these interventions, saying she could see “growth from students each time” she used them.

**Parent**

Mr. David was initially very interested in the combination intervention for Daniel, and this interest persisted throughout the study. Mr. David’s perceptions of the combination of the Social Stories™ and video modeling interventions were very positive, and included novel suggestions to adapt them to meet various students’ needs. As far as meeting students’ needs with the combination intervention in individual counseling with the school counselor, Mr. David suggested that the combination intervention was “engaging kids.” He disclosed, “At school when the kids are playing, he is just kind of being him and not paying attention to anyone else.” In counseling, it helped for the student to be “watching it on a screen” while he sat in a “calm setting.” “When they sit in front of a TV screen or whatever and have something modeled for them, I think it just gets in there a little better.”

Mr. David also noted that these interventions may not have worked with his son two years ago. “There are certain kids at certain levels…doing it two years ago…I really don’t know how much it would have helped. I think you have to look at each kid individually and see where they are at.” He went on to say that his son had recently developed his speech and comprehension skills, so he felt the combination intervention was “perfect for him” at this time in his educational program. As far as the potential of the combination Social Stories™ and video modeling intervention, Mr. David suggested using it to relieve stress before an event occurs, such as a wedding. By showing a video and/or reading a Social Story™ describing the upcoming event, the intervention can “prepare” his son for the new experience.

With video modeling specifically, Mr. David liked the flexibility of the intervention to meet the specific needs of the child. He said, “Maybe some kids would
prefer to watch themselves, and maybe some kids would prefer to watch someone they 
don’t even know…or put words to the video modeling. If it’s not working the way you 
think it should, not advancing as quickly as you want, look to see why that is and modify 
it.”

Mr. David articulated the same thing about Social Stories™. Mr. David had 
downloaded a Social Story for his son about making decisions regarding “who you want 
to sit by or who you do not, and excusing yourself when you do not.” He figured out that 
the story was written for teenagers, so it was not working. “Take a look at what’s 
working and not working and why. Figure it out and adjust it to the kid so it does work. I 
think that’s a major issue.”

When asked about critiques of the combination intervention of Social Stories™ 
and video modeling, Mr. David could not think of any critiques. “I guess I don’t think I 
know of any way to critique it. It works and it works in different ways for different 
people.” He did make suggestions for ways it could be adapted to meet other needs 
Daniel has. If someone had a video camera, and recorded throughout the day what he is 
doing, then in the evening the parent could say, “How was your day?” and “What did you 
do?” “It would be neat to have some way for him to reflect back on his day with us.” He 
also suggested adding animation to the videos to teach skills to younger students.

School Counselor

The school counselor, Mrs. Danforth, was also eager to take part in the training 
and use the intervention with Daniel. She said she used the video modeling right after the 
training. With video modeling in particular, Mrs. Danforth used the word “powerful” to 
describe the intervention, and noted a “strong positive reaction and actual improvement,” 
particularly with a high school student who was not a participant in the study. She also 
noted that she planned to continue to use it with elementary and secondary students, and 
felt it was an effective way to teach skills. She added, “The kids love watching 
themselves.”
Mrs. Danforth expressed that she had tried Social Stories™ before, but did not have formal training in using them. After the training and the intervention delivery, she said she would encourage other school counselors to “seek training and support as you learn how to write them correctly.” Mrs. Danforth also stated that she saw positive responses and improved skills from the students she worked with using Social Stories™, and attributed this improvement to the students’ love of stories.

As far as changes in Daniel’s social behavior since delivering the combination intervention, she thought it was “...hard to say whether it is improving because of my support or whether he is maturing and learning skills through the Pre-K program and is just reinforced through my support....sometimes I thought the combo was effective, and sometimes I thought it was better to do just one or the other.”

The Case of “Flynn,” age 8

Student

Flynn is an 8-year-old male student in a 2nd grade classroom in Northlake School District. The Northlake School District is a newly consolidated school district that employs three school counselors who serve the four buildings in the district. The district serves around 1250 students. In Flynn’s case, the researcher did not work directly with the parent. The school counselor, Mrs. Farmer, had read about the study on a listserv and was interested in participating in it to support several students she worked with who had been diagnosed with ASD. The school counselor was able to meet with Mrs. Carter, Flynn’s mother, who filled out the demographic questionnaire.

Flynn had been diagnosed with Pervasive Developmental Disorder-Not Otherwise Specified before the study. Mrs. Carter indicated a medical doctor and a psychologist had been involved in his diagnosis. Flynn is included in the regular classroom for the full day at Northlake, and has extensive support services. He has an IEP, a 504 plan, and a behavior intervention plan. In addition, Flynn also receives services from the Speech and Language Pathologist (SLP), the school counselor, and the gifted and talented teacher.
He also has a para-educator who is assigned to him for individual support as needed. Socially, Flynn has difficulty interacting and playing with other children. He is also easily distracted by moving things (e.g., a fly in the room, a ceiling fan), and has difficulty taking his focus off of them and putting it on his school work or group activities. As typical of students on the spectrum, he tends to perseverate on topics of interest, including dinosaurs and numbers.

**Teacher**

According to information shared by the general education classroom teacher on the Summary of Observations section of the V-II TRF, Flynn’s strengths include his broad range of knowledge from videos and nonfiction reading, as well as his interest in school and the topics they learn in the classroom. Mrs. Foster, his teacher, also notes that his spelling level is above average. Flynn struggles with written and verbal communication and working in groups. For example, he chose not to perform in Reader’s Theatre although he could read the material to the teacher individually. He also has difficulty with basic social skills and using manners. His teacher would like him to work on basic life skills involving interaction with others. She would also encourage activities that include practicing written communication. This teacher did not fill out the V-II TRF for Flynn post-intervention because the school counselor was not able to give it to her because of medical reasons.

**Parent**

The parent did not fill out the questionnaire about the social skills intervention. When contacted by the researcher, she said she had not had time to fill it out yet. However, it was not received by the deadline for this study.

**School Counselor**

The school counselor had much to share about the intervention after she attended the training for the study and had delivered the combination intervention to Flynn and other students. Mrs. Farmer noted that Flynn’s social skills training went well, but his
behavior was sporadic. She attributed this variation to medication changes, but overall felt he was “doing well” when the intervention ended.

Flynn also responded to the Social Stories™ intervention. While he had a few difficult weeks because of medication issues, the school counselor noted that “he always engaged in the activity with the Social Story, but during the period where medication was an issue, he didn’t always transfer his skills to the natural setting.”

With other students, Mrs. Farmer thought the video modeling showed positive responses with a small counseling group of Kindergarteners. These students “were not responding to our Nighthawk [mascot pseudonym] Club intervention....Once I started them in the group where I used video modeling, they started to respond to the Nighthawk Club intervention.” She felt the video modeling and the Social Stories™ interventions were “great tools” to teach any student social skills and problem-solving skills. In combination, she “liked to do the social story and then watch the video of the same social skill.” Mrs. Farmer thought the combination in this format was “a great way to teach the skill and to have the student see himself practicing the skill.”

The Case of “Brennan,” age 9

Student

Mrs. Key, Brennan’s mother, was one of the first parents to enroll her child in this study. Mrs. Key had read about the study in the Autism Society of Iowa e-newsletter. After contacting the school counselor and completing the necessary steps for the school district to participate in the study, Brennan was enrolled.

Brennan, who is a 9-year-old male, had been diagnosed by a psychiatrist with Pervasive Developmental Disorder, Not Otherwise Specified (PDD-NOS). He is in 3rd grade at Mountain Home Elementary School. Mountain Home is one of 18 elementary schools in a school district that serves more than 12,000 Pre-K-12 students. This elementary school has one school counselor who serves about 300 students. He is included in the regular classroom for the entire school day. A 504 plan has been
developed for him to support his coping in the classroom, as he has difficulty with “meltdowns in stressful situations.” In addition to the 504 plan, the school counselor has also been working with Brennan on his presenting concerns.

**Teacher**

Ms. Hart is Brennan’s classroom teacher. She describes Brennan as “a curious and enthusiastic learner when he is interested in the topic.” He has strong math reasoning and reading skills. Brennan’s main difficulty is social skills. He “talks out” often in class, and is aggressive toward others during unstructured activities. Brennan shares that he wants to make friends and is remorseful when he has been hurtful toward them. Ms. Hart’s suggestions for counseling goals include developing social skills as well as coping skills to manage anger and stress.

In regard to the interventions, Ms. Hart appreciated the interventions because they could be specifically applied to the skills or situations Brennan was working on. For example, the stories or the videos could take place in the specific environment the student was having difficulty. She felt using the student’s environment as a background helped to give Brennan visual cues as to when to apply the skills. She also felt the “routineness” of the interventions allowed Brennan to repeatedly practice the skills.

As far as each intervention specifically, Mrs. Hart saw the Social Stories™ intervention as a “communication tool” for Brennan to process the social skills. She described the video modeling intervention as a “powerful tool” that allowed the student to “role play” the social skills. She commented that the combination intervention creates opportunities for “rehearsal” of the skills needed in given situations. She had no critiques of either intervention specifically or the interventions used in combination.

**Parents**

Both of Brennan’s parents were interested in completing the Questionnaire for Parents. Brennan’s mother felt the combination intervention was “valuable” because it allowed Brennan one-on-one time to go through the scenarios. She also shared that
Brennan enjoyed the visual nature of the intervention, and expressed that Brennan said, “it was fun” for him to use them. Brennan’s father, Mr. Key, also focused on the visual nature of the combination intervention, and felt it was especially helpful for Brennan to see his own behavior using the video self-modeling strategy. They also added that the video modeling used in conjunction with the Social Stories™ helped Brennan to create a higher level of understanding through watching his actions rather than simply talking about the story. Mr. Key noted that Brennan could see how his own behavior impacted others at school. Mrs. Key added that working with the school counselor supported Brennan in that it helped him to “build a trusting relationship with someone outside of the home.”

About the video modeling specifically, Mrs. Key said to “tell them what a positive impact [this intervention] had on reducing the number of meltdowns at school…ASD kids have trouble empathizing with their peers.” Both parents felt that video modeling helped Brennan understand how his behavior appeared to others, and Mrs. Key reiterated, he just “thinks it’s fun.”

For Brennan, Mrs. Key commented, “variety is key to making sure the coping plan is not narrowly applied to only one situation.” The school counselor was able to use the Social Stories™ intervention to apply the video practice to a variety of contexts. Mr. Key reinforced that the Social Stories™ were helpful to teach Brennan positive behaviors to allow him to be successful socially. Repetition also helped Brennan.

Neither parent had critiques of the combination Social Stories™ and video modeling intervention. They both did add additional comments to the questionnaire expressing their appreciation for the support the study provided to families with ASD. Mrs. Brennan wrote, “I greatly appreciate your personal effort to help our kids with ASD. It is often a difficult condition for children to deal with and I think it is important to help them see that they can be accepted without judgment from others outside their family. Brennan told me the most important thing he learned was to be himself. Thank you!!”
School Counselor

Ms. Bell, the school counselor, also identified ways in which the interventions had a positive impact on Brennan’s social development. She responded that the video modeling seemed to help him recall the preferred behavior so he was able to process problem situations better than before. Social Stories™ seemed to have a similar effect, as Brennan could “verbalize the retell of the social stories when there are difficulties.” Ms. Bell reported that Brennan was eager to make Social Stories™, and he initiated writing them when a theme was mentioned. She felt it was helpful for her to start out with simple stories so that she knew she was following the specific formula prescribed by Carol Gray. As far as the combination intervention, she suggested that writing the story and then videotaping the students as “video stars” helped to ensure that they students were “really understanding it and can do it [the skill]”. Ms. Bell felt that this made the skill more personalized. In regard to Brennan’s progress with the combination intervention, the school counselor was unsure. “I thought he was making progress in his social behavior development, but recently his behavior in general has become more aggressive (but is better able to process problems) toward others and himself. I wonder if that is related to puberty, as he has developed physically quite a bit lately.”

The Case of “Caleb,” age 10

Student

Caleb is a 10-year-old male student in the Moonville School District, which enrolls around 2000 students who attend five school building sites in their PK-12 system. They have five school counselors who provide services to the Moonville students. Caleb receives school counseling services while he attends the 5th grade at Roosevelt Intermediate School in the city of Moonville. Caleb was previously diagnosed with Autism by a team of medical professionals, including a medical doctor, psychologist and psychiatrist. In addition to school counseling services, Caleb’s additionally receives many special education supports. He has an IEP with a Behavior Intervention Plan (BIP), which
outlines his services delivered by the Behavior Disorder teacher, a speech and language pathologist, and para-educator who supports him as he integrated into the general education classroom for most of the day. Caleb also has Adaptive Physical Education.

Caleb’s biological grandmother, who is his adoptive mother, enrolled him in the study at an Autism Society of America chapter meeting. Mrs. Gray shared that she was very interested in these interventions for Caleb, and thought he would be an excellent candidate for the study. The presenting concerns that she felt Caleb could work on included getting along with peers, and accepting responsibility for his actions. She also disclosed that Caleb’s grandfather had recently passed away and thought he could benefit from some grief work with the school counselor to better understand and cope with the change in their family.

**Teacher**

Mrs. Craig is Caleb’s classroom teacher. She acknowledged that Caleb struggles with change, and has difficulty “letting things go.” Caleb does better when a highly structured environment is provided for him, with support and prompts from the para-educator to complete work, especially written assignments. Mrs. Craig also describes Caleb as a kind, loving, thoughtful and bright student who tries to please others. He also has a dramatic side.

Because of this dramatic side, she believed these interventions matched Caleb’s strengths. She shared that he really enjoyed writing the Social Stories™ using the comic strip format. She also noted that she saw improvement in his ability to think before he made decisions. Caleb was able to participate in chorus as an extra-curricular activity, and sing at chorus concerts this year. They could prepare for them through the Social Story and video-modeling intervention. After the intervention, she felt he still struggled to get along with peers. So, she recommended continued work in this area.

Mrs. Craig responded to the Questionnaire for Teachers, which asks questions about the Social Stories™ and video modeling intervention, only by writing the
following: “I honestly do not have any background in the questions being asked, therefore, I have no idea how to even answer them.”

**Parent**

Mrs. Gray focused on the visual nature of the combination intervention as a key component for Caleb. She said Caleb could “see the right way to do it [the skill]” and his mind was more able to grasp the concepts being taught to him. She believed that both the video modeling and Social Stories™ interventions were “wonderful learning tools for children.” To be effective, she suggested that they needed “to be short and to the point” to focus specifically on what Caleb needed to learn.

**School Counselor**

Ms. Williams saw the intervention as a way to help Caleb “become more aware of some of the issues of concern.” The Social Stories™ were especially helpful to allow Caleb to remember situations through recitation of the stories in applicable situations. Ms. Williams reported that she chose not to use the combination intervention in each same session, but rather alternated one or the other throughout the semester in her work with Caleb. In the counseling session, Ms. Williams did not make videos with Caleb, but found some online that she used. She felt they were a “useful tool to practice whatever social skill we were learning about.” She commented that he enjoyed watching them several times. Caleb also had fun using the Social Story format, especially when they used the ToonDoo website (Zoho Corp., 2011) to make the stories into cartoon strips. She noted the cartoon format was “very age appropriate for elementary students,” and Caleb “liked to keep copies of the cartoons for his house and his classroom and shared them with his classmates, teachers and family.”

**The Case of “Andrew,” age 11**

**Student**

Andrew is an 11-year-old male, who had been diagnosed with Asperger’s Syndrome by a psychiatrist. He is supported with an IEP in school, and is integrated into
the general education classroom for math and language arts. He attends a private, parochial school where the K-12 enrollment is about 800 students, in Alamo City, which is populated by approximately 30,000 people. Social behavior goals that have been established for Andrew at St. John’s parochial school include: 1) to converse properly with classmates, 2) manage frustration with others, and to 3) to work independently. His school counselor initiated enrollment in the study after reading about it on a listserv. Her motivation for enrollment was to specifically support Andrew at school.

**Teacher**

Mrs. Russo reports that Andrew enjoys reading and participating in classroom discussions when he is interested in the topic. Andrew has difficulty with writing assignments, organization and studying for tests, and waiting his turn. He also gets overwhelmed socially around other students, so he tends to disengage from social situations.

Mrs. Russo completed the Questionnaire for Teachers to give her perspective on the intervention. Although she shared that she did not know a lot about the combination intervention, she did notice the short-term effect on Andrew. “He was doing a lot of physical touching and grabbing and students were annoyed. So we talked about how would you feel if someone did this to you. This would help in the short term, but I am not sure if there were any long-term effects.” She felt that Social Stories™ has the potential to work with a variety of students and their presenting concerns. She said she believed Social Stories™ worked with students because “all kids love stories,” and they help students to see “the big picture.” However, she was not clear how the combination intervention supported Andrew, as she had not seen it delivered to him. She shared that she felt any successes Andrew had were more attributable to work the teachers were doing rather than what the school counselor did through the interventions.
Parent

Mrs. Adams was also hesitant to comment explicitly about the intervention. She was willing to say that the combination intervention allowed Andrew “to truly understand” what they were working toward with him, and it helped him to relate to others. Mrs. Adams also “noticed repetition is very helpful for my son. Watching the video after doing it [the skill] himself helped the concept to stick.” Mrs. Adams did not comment on the other questions pertaining specifically to each of the interventions or to the question about the critiques of the combination intervention. She wrote that she could not because she did not see the interventions for herself. However, she did share in the comment section that “these kids [diagnosed with Autism Spectrum Disorders] need all the help they can get to succeed in the real world! Public knowledge and education about the autism spectrum is very helpful to make people understand!”

School Counselor

Ms. Abbey, the school counselor, believed the intervention was helping Andrew to develop his social skills. She noted that Andrew used what he learned as tools to use in different situations. She also felt he interacted more frequently with peers and was more open to share with the school counselor. According to Ms. Abbey, Andrew was able to identify both positive and negative behaviors in the videos that watched. Ms. Abbey also thought it was helpful to make copies of the videos for Andrew so that he could watch them at home. Ms. Abbey’s comments echoed Mrs. Adams comments in regard to repetition, saying the repetition of the videos at home and school were “a good way to reinforce positive behaviors.”

Ms. Abbey found that Social Stories™ that did not entirely fit the situation of focus were frustrating to Andrew. To make them applicable to specific situations, she recommended writing the stories with the student or creating them together in a comic strip format. Ms. Abbey made copies of these stories or comic strips for the teacher and parent as well. This collaboration with the teacher and the parent allowed the student
additional opportunities to practice what the school counselor was working on with Andrew. Ms. Abbey felt that “using both interventions led to faster and more positive results.”

The Case of “Eric,” age 13

Student

Eric is a 13-year-old male student who has been diagnosed with Pervasive Development Disorder – Not Otherwise Specified by a psychologist. He is in the 8th grade at Green Water Community Schools. He attends the 5th-8th grade middle school building, in which one school counselor works with about 350 students. He has an IEP, and receives additional support from the school counselor and a para-educator. He is in regular classrooms most of the day, except for math class. His social developmental goals are to interact in age-appropriate ways with peers in a variety of settings.

Teacher

Mrs. Moe, Eric’s special education teacher, identified several of his strengths. These included: “reading comprehension, basic math skills such as math facts, money, and time and class participation.” She notes he is also prompt and polite, and uses his time in class wisely. Difficulties Eric presents relate to routine changes, and seeing multiple viewpoints. Mrs. Moe says he tends to “see things as black or white,” meaning he does not often understand the complexities of situations. Most of the time, he blends in well with his peers socially. However, he does not share with the teachers if something is bothering him. At this time, he does not get involved with any extra-curricular activities, either. The teacher would encourage him to talk to adults when he has concerns, and to participate in extra-curricular activities for his social development.

Parent

On the Questionnaire for Parents, Ms. Light shared that she felt she could not be very helpful discussing the intervention because she did not have much information about them. She noted that she did not see the combination intervention. However, she wrote,
“from the reports from school, my son is starting conversations and greetings with teachers.”

School Counselor

The school counselor, Ms. Black contacted this researcher to enroll in the study because she heard about it from another school counselor. She felt it would be beneficial in her work with this student and other students who were also diagnosed with an autism spectrum disorder. She debated which student she would like to work with for the study, and chose Eric because she felt his parents were most supportive of the intervention for him. The school counselor did complete the intervention over the course of the semester and documented her work. She also had Mrs. Moe complete the Vineland II Teacher Rating Scale before and after the intervention. Ms. Black did not complete the Questionnaire for School Counselors. After contacting the school, this researcher found out that the school counselor had taken a different position at the end of the year.

Emergent Themes from Multidisciplinary Team Members

Some of the comments shared by multidisciplinary team members were common across roles and are therefore discussed in the Cross Case Synthesis section toward the end of this chapter. Other themes of these multidisciplinary team members were specific to the roles in which they related to the student on the autism spectrum. These role-specific themes are described in the sections, which immediately follow.

Themes of Parents

Theme 1: Parents’ Use of Social Stories™ and Video Modeling Interventions. After enrolling in the study, some parents learned about the Social Stories™ and video modeling interventions and were able to use them to support their students at school and at home. One parent disclosed, “I ask them [the school] to show me what we can do at home.” He went on to say that he felt the need to “seek out information” because he did not want to “leave it up to the school, the school is not going to cure my kid.” The same
parent shared he now created a combined version of Social Stories™ and video modeling with his son on his son’s IPad (© Apple, 2011) to help his son prepare for novel situations. “I go over to his new school now, and I take pictures with the IPad, and I use a program on the IPad, and he can view those pictures by setting a story with Voice Over, and now he is going to know...this is my toilet in my new school...this is where I play.” Other parents shared that they appreciated having the video modeling recordings sent home, “having a video to watch after doing it himself helps it to stick.” One parent wondered if the interventions could be used at home to help parents relate to their children with ASD regarding their school experiences. “I would like for him to come home, and I’d say how was your day, what did you do? It would be kind of neat to have some way for him to reflect back on his day with us.”

Not all parents were informed about the combination intervention or had thought about their potential use for home. One parent left some of the questions about the interventions blank. This parent wrote that she felt she could not evaluate the interventions, “not having seen it for myself.”

Theme 2: Parents Appreciate Support of their Students with Autism Spectrum Disorders. Several parents appreciated the purpose of the study and efforts by the researcher and the participating school counselors to support their children. Specifically regarding participation in the study, Mr. David said, “I was more than happy to have him participate in it [the study]. I know some people had problems with their school districts to participate in the study, and why that is, I don’t know. For me, it was a good thing, a win-win situation.”

Parents felt that the study provided school counselors with information that helped the counselors support their sons in the school system. These sentiments are evident in the following statements:

It [individual counseling with the school counselor] allows him to build a trusting relationship with someone outside the home. – Mrs. Key
Also, public knowledge and education about the autism spectrum is very helpful to make other people understand. I greatly appreciate your personal effort to help our kids with ASD. – Mrs. Adams

It (Autism) is often a difficult condition for children to deal with, and I think it is important to help them see they can be accepted without judgment by others outside their family. – Mrs. Key

All of these quotes were taken from the open comment section of the Questionnaire for Parents. It seems parents valued the support of their students and appreciated that people who were not parents of students with ASD were providing education about these disorders, and advocating for services for these students as well.

**Themes of Teachers**

**Theme 1: Teacher Knowledge of the Intervention.** Five of the six teachers who participated in the case study responded to the Questionnaire for Teachers. These teachers seemed to have varying levels of knowledge about the interventions. Two of the teachers seemed very aware of both interventions and added clear comment to the study of the Social Stories™ and video modeling critique. One of these teachers felt the interventions “gave multiple ways of accessing the learner.” In another example, one teacher wrote the following detailed response when asked how the combination intervention met the needs of students on the spectrum.

> Video modeling and Social Stories™ interventions are individually tailored to each student to address the specific needs of that child. They provide consistent, meaningful routines for students to practice. The videos and social stories contain images of the child in his or her environment. This provides explicit, visual cues and reminders for the student to practice and follow when needed. – Mrs. Bell

One teacher was aware of the Social Stories™ intervention because she had just recently attended a workshop in which the intervention was discussed; however, she responded that she had no background knowledge about video modeling. This teacher felt the Social Stories™ intervention would work with students because “stories work with students.”
The other two teachers who responded to the Questionnaire for Teachers explained they had no knowledge of the interventions. One said, “I have no idea how even to respond” and the other said that she “could not comment or say anything” about them. This theme relates to collaboration of multidisciplinary team members, which will be commented on in the Cross Case Synthesis and the Discussion in Chapter V.

Themes of School Counselors

Theme 1: Training Needs of the Professional School Counselor. One theme that was clear from the school counselors’ responses on the questionnaire they completed, as well as the comments that were verbalized in the autism training facilitated by the researcher, was the necessity for training specific to the needs of students with Autism Spectrum Disorders. First, the reasons for training stemmed from professed needs from others for school counselor support. A school counselor shared that there were “many times when teachers or parents have asked me to talk with a child with ASD.” School counselors recognized, though, that they needed additional knowledge, skills, and awareness to be competent to meet the needs of students on the autism spectrum. School counselors shared they “needed more background knowledge” such as “current information” on the ASD population. For example, information on intervention strategies was found useful. School counselors appreciated “specific useful skills to address the needs of the ASD students.” In addition, school counselors valued that they had greater awareness about the disorder. “It was important to have training to be able to understand different needs and characteristics of students on the spectrum to understand that their needs can be met, but in a different way.” It also helped them to understand that parents of students with ASD wanted their support. One counselor said, “I was glad to hear that most parents are excited about any help we may be able to give to their child.”

Theme 2: The Role of the School Counselor with Students with Autism Spectrum Disorders. Once trained, the needs of students with ASD seemed to fit the role of the school counselor. School counselors’ service delivery includes individual and small
group counseling (American School Counselor Association, 2005). School counselors in this study used the combination social skills intervention with individuals and small groups. School counselors are also seen as the experts in schools regarding social/emotional and behavioral development. The school counselors also indicated that they found the intervention useful with elementary as well as secondary students (although secondary students were not a part of this study), and with students with a variety of presenting problems. “We have developed a social skills group, and will continue to include other students who can benefit from the experience.” Another counselor used the intervention in her “problem-solving group.” In individual counseling, school counselors could transfer the “social story skill into real life examples.” Another counselor suggested that Social Stories™ could be used to teach “positive behaviors.”

Training also seemed to increase opportunities for school counselors to act as leaders and advocates to this population, which included collaboration and consultation with multidisciplinary team members about students with ASD. Several examples of enhanced collaboration are mentioned.

I talk about the benefits of using video modeling along with Social Stories™ with them [parents, teachers and other professionals]. – Ms. Abbey

I was able to use information about students with ASD to help staff who work with those students to understand them better. – Mrs. Farmer

By implementing the social skills and visual cues, the school team is being more united in meeting the student’s needs. – Mrs. Bell

The comments here suggest training allowed school counselors to play an integral role in supporting ASD students through leadership, advocacy, and collaboration.

Theme 3: Social Stories™ and Video Modeling as a Part of a Comprehensive School Counseling Program. For the school counselors in this study, Social Stories™ and video modeling were novel strategies they could “implement into their comprehensive school counseling programs.” Counselors felt the combination intervention could work with other populations with whom they work. One wrote, “I needed more knowledge on
students with ASD, as well as a new method to help teach students, not just ASD students, but any student, social skills. Two great ways to do that is through Social Stories™ and video modeling.” Counselors started using the interventions they learned in the training in small group counseling with other students who were not diagnosed with ASD, “to include others who can benefit from the experience.”

Theme 4: Competence, Confidence and Commitment to Students with ASD. The training seemed to help the school counselors understand the needs of students with autism at a deeper level than they had before the training, but at times school counselors felt the need to learn more. One wrote, “I felt ready to try new strategies right after the training.” However, another counselor said, “I loved the video modeling and want to learn more about other effective ways to use this.” Some counselors mentioned they would have liked more time to role-play or to practice writing more Social Stories™ during the training. Others sought out resources on their own after the training, such as manuals on Social Stories™ (e.g., Think Socially, by Michelle Garcia Wiener). It is unclear as to whether this need for more training related to competence or confidence, but it seemed these school counselors were willing to develop the skills they needed to a level in which they felt comfortable.

The willingness by some school counselors to seek out further training seemed to suggest an increased commitment to the autism spectrum population. “I plan to continue my training and understanding of ASD students, as the need is certainly at our school.” Commitment was also identified as a necessary component of working with students with ASD. A school counselor wrote of this need for commitment, “Work with teachers and associates (if there is one) to plan and commit to treatment/interventions with students with ASD.” One wrote about the importance of the social skills development for students with ASD, saying, “it’s important to work to teach them the social skills they need.” Another counselor suggested that school counselors need to “have patience” and to realize “their [ASD students] needs can be met.” All of these statements suggest a new
sense of necessity for school counselors to work with students diagnosed with Autism Spectrum Disorders.

Cross Case Synthesis

This Cross Case Synthesis is a description of the themes that emerged across multidisciplinary roles. These themes are those that multidisciplinary team members, that is, the parents, teachers and school counselors who participated in this study, have in common. Although the perspectives on the themes from these groups may be comparable or dissimilar, comment on each theme has been compiled for a comprehensive illumination of the issues within the multidisciplinary team.

Theme 1: The Combination Social Stories™ and Video Modeling Intervention Meets the Needs of Students with Autism Spectrum Disorders. Parents, teachers, and school counselors report that one strength of the Social Stories™ and video modeling interventions is that the combination can be individualized to target the idiosyncratic needs of the student. School counselors demonstrated flexibility to individualize the interventions as some used both interventions in one session, while others alternated between Social Stories™ and video modeling or used the intervention most appropriate for the student and the situation. One counselor “liked to do the social story, and then we would watch the video of the same skill.” Another counselor wrote that she thought “it was better to do just one or the other” intervention in each session. Still another counselor thought that “using both interventions together lead to faster and more positive results.” Counselors also were able to modify the interventions in delivery style. In addition to delivering the interventions in typical ways, school counselors made YouTube videos and created online cartoons using the ToonDoo website, and a parent created Social Stories™ on his son’s IPad. Individualization of the content was mentioned as important as well so that the student with ASD “does not become frustrated if it [the Social Story] doesn’t entirely fit his/her situation.” A counselor expressed that “you may need to write/create your own to make it applicable to your situation.”
A teacher suggested that the effectiveness of the intervention from her perspective “depends from kid to kid, but students with ASD seem to respond better to this type of learning.” However, a parent wrote that being responsive to the preferences of the student can make a difference in how well the intervention helps a student. This is evident in a quote from Mr. Key, “…if it’s not working the way you think it should, or not advancing as quick as you want, look to see why that is and modify it…For instance, maybe some kids would prefer to watch themselves, and maybe some kids would prefer to watch someone they don’t even know.”

Multidisciplinary team members expressed a need to use the intervention in preventative ways. Since students with ASD have difficulty knowing how to act in new situations or may have difficulty generalizing learned behavior from one situation to another. One parent shared his plan to use the intervention to prepare for an upcoming wedding. A counselor said that after the intervention, the student “had tools he can use in different situations.” Another counselor felt that review of the video modeling intervention could be used “as a preventative step.”

While individualization was important to multidisciplinary team members, another reported strength of the combination intervention is the visual nature of it. Several multidisciplinary team members reported that the visual nature of video modeling helped the student participants learn social skills. Examples of what parents said about video modeling are: “it helps them to visually see what to do, and the right way to do it” and “seeing it right before them helps their mind to grasp the concept.” The videos also help the students see themselves. Parents, teachers and school counselors suggested that when students with ASD see themselves, it helps them to “see how their actions impact others.” School counselors added that they saw a “strong positive reaction and actual improvement” using the video modeling. Several team members attributed the improvement to the “visual cues” students see after watching the videos; one counselor
explained this concept, suggested that the “video modeling intervention seemed to help him recall the modeling.”

Theme 2: The Combination Social StoriesTM and Video Modeling Intervention is a Developmentally Appropriate Intervention for Students on the Autism Spectrum. As mentioned, students with ASD have specific needs. Many of these needs are developmental in nature. That is, as indicated by their diagnosis, students with ASD are developmentally delayed in social behavior development. Interventions that are developmentally appropriate allow students with ASD an opportunity to develop the skills they have not previously acquired in a manner interesting to them, and in ways that match their cognitive abilities.

Multidisciplinary team members identified the combination intervention as developmentally appropriate in several ways. First, they suggested that the students had a good experience participating in the intervention, and were engaged when they were used. The intervention in combination was described as a “teaching tool” by many participants across multidisciplinary team member roles to illustrate how the intervention could be used to deliver the social behavior content that was needed for the student. As “teaching tools”, the school counselors could simulate play with the intervention. For example, school counselors reported participating students loved to be “stars” in the videos. Parents wrote that their children “enjoyed having the visual references”, “loved watching themselves”, and said, “that it was fun.” Counselors also seemed to be motivated by the students’ responses to the intervention, as they reported they were glad to see students react “favorably” to the intervention. Furthermore, students were “eager to make social stories”, would “initiate writing social stories” when a theme was mentioned, and one student “liked to create his own using the comic strip format.” Teachers supported this idea that students liked to watch the videos and write the stories. For example, one teacher wrote, “stories work with students”, and another teacher depicted
video modeling as a “powerful tool to allow students to role play how they would act in different situations.”

The Social Stories™ and video modeling combination intervention was also developmentally appropriate as the combination reinforced skill development through repetition. All multidisciplinary team member groups commented on the benefits of repetition that the combination social skills intervention provided participating students. One counselor suggested it was most helpful to adhere to the following steps: 1) Write the Social Story together, 2) Practice the Social Story, 3) Video tape the modeling intervention, and then 4) Review the video modeling intervention repeatedly as a preventative step. Parents commented “that repetition is very helpful for my son”, and “when they get the chance to sit down and watch them at least a couple of times over and over, it gets into them.” A teacher noted that the combination intervention provided students with “multiple ways of accessing the information.” In essence, the students learn and practice the target behaviors in multiple ways, providing opportunities for repetition.

**Theme 3: The Benefits of the Use of Collaboration with the Combination Social Stories™ and Video Modeling Intervention.** As mentioned previously in the School Counselor Theme section, one role of the school counselor is collaboration. While collaboration fits into the role of the school counselor, a related theme that appeared across multidisciplinary roles was that at times collaboration was generated because of the intervention. School counselors who were trained to use the intervention collaborated with other team members to reinforce the skills. For instance, one said, “send a copy to the teacher and one to the parent so they can reinforce what you are doing.” Collaboration also opened up opportunities for the student to socially interact with others. A counselor shared that the student she worked with “liked to keep copies [of the comic strip stories] for his house and his classroom to share with classmates, teachers and family.” Teachers could use the videos and stories as “explicit personal references to draw on when there was a need to follow through on that specific behavior in a real situation.” A few parents
were interested in learning more about how to use the intervention at home to relate to their kids. One parent was even interested in collaborating with the researcher because he had ideas for modification of the intervention for use in future studies. However, collaboration among multidisciplinary team members did not always occur. Some teachers and parents wrote that they could not comment on the interventions because they did not see them, or did not have much knowledge about them.

**Results from the Vineland-II Teacher Rating Form**

According to the Vineland-II Teacher Rating Form Manual (Sparrow, Cicchetti, & Balla, 2006), the Vineland-II Teacher Rating Form can be used to assess educational treatment interventions upon levels of adaptive functioning. The Vineland-II TRF assesses adaptive behavior through three domain scores for Communication, Daily Living and Socialization. The domain scores were reported in the form of Standard Scores. The Adaptive Behavior Composite score was calculated by summing the domain scores, and deriving a Standard Score from the norm tables in the V-II TRF manual.

In this study, teachers of the student participants filled out the Vineland Teacher Rating Form in January of the year of the study before the interventions began. These individual scores are reflected in the Pre-Communication, Pre-Daily Living Skills, Pre-Socialization, and Pre-Composite Scores (Table 3). The same teachers who completed the V-II TRF pre-assessment, also completed the V-II TRF after the Social Skills and video modeling combination intervention was delivered at the end of the Spring semester of the year of the study. The corresponding scores from the post-assessment are reported in the following table as the Post-Communication, Post-Daily Living Skills, Post-Socialization, and Post-Composite Scores. Scores for Flynn are not reported as the teacher was not able to complete the post-assessment due to personal reasons stated by the school counselor.
Table 3. Student Domain and Adaptive Behavior Composite Standard Scores on the Vineland-II Teacher Rating Form Pre- and Post-intervention

<table>
<thead>
<tr>
<th></th>
<th>Pre Communication</th>
<th>Post Communication</th>
<th>Pre Daily Living Skills</th>
<th>Post Daily Living Skills</th>
<th>Pre Socialization</th>
<th>Post Socialization</th>
<th>Pre Composite Behavior</th>
<th>Post Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel</td>
<td>72</td>
<td>69</td>
<td>70</td>
<td>60</td>
<td>69</td>
<td>71</td>
<td>46</td>
<td>43</td>
</tr>
<tr>
<td>Brennan</td>
<td>80</td>
<td>89</td>
<td>74</td>
<td>97</td>
<td>76</td>
<td>81</td>
<td>75</td>
<td>88</td>
</tr>
<tr>
<td>Andrew</td>
<td>67</td>
<td>80</td>
<td>86</td>
<td>82</td>
<td>78</td>
<td>74</td>
<td>75</td>
<td>77</td>
</tr>
<tr>
<td>Caleb</td>
<td>88</td>
<td>88</td>
<td>78</td>
<td>93</td>
<td>78</td>
<td>83</td>
<td>79</td>
<td>87</td>
</tr>
<tr>
<td>Eric</td>
<td>94</td>
<td>89</td>
<td>84</td>
<td>89</td>
<td>78</td>
<td>82</td>
<td>84</td>
<td>82</td>
</tr>
</tbody>
</table>

Using SPSS ®, individual student scores shown in Table 3 were entered and then analyzed. Means and standard deviations were calculated, along with t-tests, which are shown in Table 4. No statistical significance was found in any of the tests of the domain mean differences, or of the composite mean differences. Therefore, no further tests were completed on the sub-domains, as they would not have shown statistical significance if the domain and composite scores did not. Effect sizes (ES) were also calculated, and are displayed in Table 5. Clinical significance was determined using effect sizes, and were based on a discussion of clinical significance in autism research studies (Cicchetti, Koenig, Klin, Volkmar, Paul, & Sparrow, 2011). As reported in this journal article (Cicchetti et al.), Cicchetti’s previous recommendations in 2008, expanded on Cohen’s ES guidelines, and included the following ES suggestions for clinical significance: <0.10 = Trivial; 0.10–0.29 = Small; 0.30–0.49 = Medium; 0.50–0.69 = Large; and 0.70 or higher = Very Large.
Table 4. Paired Samples T-tests for Pre- and Post- Domain and Composite Scores on the Vineland-II Teacher Rating Form

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>d f</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST COMMUNICATION – PRE COMMUNICATION</td>
<td>2.80</td>
<td>7.823</td>
<td>3.49</td>
<td>-6.914</td>
<td>12.51</td>
</tr>
<tr>
<td>POST DAILY_LIVING – PRE DAILY_LIVING</td>
<td>5.80</td>
<td>13.48</td>
<td>6.02</td>
<td>-10.93</td>
<td>22.53</td>
</tr>
<tr>
<td>POST SOCIALIZATION – PRE SOCIALIZATION</td>
<td>.400</td>
<td>5.128</td>
<td>2.29</td>
<td>-5.968</td>
<td>6.768</td>
</tr>
<tr>
<td>POST COMPOSITE – PRE COMPOSITE</td>
<td>3.60</td>
<td>6.804</td>
<td>3.04</td>
<td>-4.849</td>
<td>12.04</td>
</tr>
</tbody>
</table>

p<.05 shows statistical significance

Using Cicchetti et al.’s (2011) recommendations, the calculated effect sizes from data in this study show a moderate clinical significance in the Daily Living domain, and a small clinical significance in the Communication domain and in the Adaptive Behavior Composite scores for the Vineland-II Teacher Rating Scale (see Table 5). Discussion of the meaning of these data in relation to this study, as well as the limitations of these findings, occur in the Discussion chapter of this thesis.

Table 5. Calculated Effect Sizes and Clinical Significance Levels

<table>
<thead>
<tr>
<th>Effect Size</th>
<th>Clinical Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST COMMUNICATION – PRE COMMUNICATION</td>
<td>.27</td>
</tr>
<tr>
<td>POST DAILY LIVING –</td>
<td>.47</td>
</tr>
</tbody>
</table>
Summary of Research Findings

The findings in this chapter suggest that parents, teachers, and school counselors had dissimilar and similar themes that emerged as they critiqued the Social Stories™ and video modeling combination intervention. The following themes were specific to the role of the multidisciplinary team member.

1. Parents expressed that they value being able to use the Social Stories™ and video modeling combination intervention at home to engage in their students’ learning at school, and to facilitate learning of social skills needed at home.

2. Parents appreciate support of their children diagnosed with ASD from school counselors and researchers. School counselors and researchers who are informed about this population are better able to help students and parents with presenting concerns.

3. Teachers had varying levels of knowledge about the Social Stories™ and video modeling intervention. Teachers could not support the intervention if they did not know much about them.

4. School counselors have been asked to work with the ASD population before this study, and they saw a need for the training offered in this study, as well as continued training.

5. The school counselors in this study were trained in the combination Social Stories™ and video modeling intervention. After training, they used the intervention in individual and small group counseling, and also collaborated and consulted with teachers and parents to serve students with ASD.
6. School counselors expressed they were more committed to students with ASD, and were motivated to work with them at the end of the study.

7. School counselors used the combination intervention with a variety of students with a variety of presenting concerns in their school counseling programs. Other themes that came out of the qualitative data were evident across multidisciplinary team roles after the researcher completed the cross case synthesis.

1. Students with ASD have identifiable and specific needs. A strength of the combination social skills intervention is that it can be individualized to meet these specific needs. Particularly, the intervention can be individualized by content and by delivery style.

2. The visual nature of the combination intervention seemed to fit well with identified strengths of students with ASD.

3. School counselors worked with teachers and parents to help with generalization of the skills in various environments and situations (e.g., home, classroom, grocery store). However, generalization was difficult for students at times.

4. The social skills needs of students with ASD are developmental in nature. Qualities of the intervention were developmentally appropriate because the intervention included stories and videos, which students enjoyed and found engaging.

5. Another benefit of the combination Social Stories™ and video modeling intervention was that it allowed for repetition of the skill as students with ASD did read the stories multiple times, watched the videos repeatedly, and shared the stories and videos with parents, teachers, and peers at times.

6. Collaboration was needed so that teachers and parents could prompt students to practice the skills in real-life situations. Also, parents and teachers needed to know about the intervention so that they could monitor its effectiveness and contribute to multidisciplinary discussions about plans and objectives for students.
7. Overall, parents, teachers, and school counselors seemed to support the use of Social Stories™ and video modeling interventions for students with ASD.

The Vineland-II Teacher Rating Form was completed by the classroom teacher before and after the social skills intervention. These data helped to determine if the students in the study improved their adaptive behavior possibly through the intervention. It was used to triangulate the qualitative findings of the multidisciplinary team members. The data did not show statistical significance for any of the domains or for the composite score. A moderate level of clinical significance was found in the Daily Living domain, and a small level of significance was found in both the Communication domain and the Adaptive Behavior Composite Scores. Thus, the effect sizes from the quantitative findings suggest some positive clinical differences in the social behavior of the students, which support the positive recommendations from the multidisciplinary team members who participated in this study.
CHAPTER V
DISCUSSION

A writer for the Penn State Collegian interviewed Dr. Temple Grandin after she gave a speech to the Penn State University students and faculty (Ridan, October 14, 2011). Grandin said, “I wouldn’t want to snap my fingers and not be autistic anymore. I love the way I think.” Her sentiments in this interview represent an idea that may be changing the way students with autism are educated. Her idea suggests that students on the autism spectrum do not need to change the way they think to fit into the world around them, but rather to use the way they think to maximize their potential in it.

A challenge, then, for educators is to find ways to work with students with Autism Spectrum Disorders (ASD) and to use the way they think to help them to achieve educational goals and standards. Educators and parents, as members of multidisciplinary teams, are charged with the task of identifying educational strategies and interventions, which best utilize strengths of the ASD student population to help them learn. Although they did not choose the intervention in this study, the study may have provided them with information that may help them with future decision-making regarding the use of this combination intervention as multidisciplinary team members. Researchers have suggested that the intervention in this study, Social Stories™ and video modeling, are well-suited to the strengths of students on the autism spectrum (Scattone, 2008; Thiemann & Goldstein, 2001).

This study is an investigation of the perceptions of educational multidisciplinary team members (i.e., school counselors, parents, teachers) regarding a social skills intervention, which is a combination of Social Stories™ and video modeling interventions, for the development of social behavior in students with Autism Spectrum Disorders (ASD). A Qualitative Criticism methodology has been used to achieve the purpose of this study. Qualitative data have been collected from the comments on the Questionnaires for Parents, Teachers, and School Counselors along with the information
on the Demographic forms and the Vineland-II Teacher Rating Forms completed by the multidisciplinary team members in this study. The following Qualitative Criticism examines these social skills intervention for students with ASD based on the perceptions of these multidisciplinary team members.

**Qualitative Criticism**

Similar to the findings in Rankin and Aksamit (1994), some of the findings of this study are particular to the role of the multidisciplinary members (i.e., parents, teachers and school counselors), while others are consistent across multidisciplinary team member roles. The findings by the parent role, teacher role and school counselor role are discussed first, followed by the conclusions that can be drawn across multidisciplinary team member roles. From the subjective lens of the multidisciplinary team members in this study, collectively team members seem to support the use of the combination Social Stories™ and video modeling interventions for several reasons. The strengths multidisciplinary team members report for the use of the Social Stories™ and video modeling combination intervention, as well as the weaknesses of this intervention are discussed throughout this chapter.

**Parent Support for the Interventions**

One strength that parents identify for the use of the video modeling and Social Stories™ intervention is the transferability of the intervention between school and home settings. While some parents used the interventions at home to reinforce the goals of the school, others adapted them to support their children’s needs at home. Parents could reinforce the school goals when copies of the Social Stories™, cartoon strips or videos were sent home. Parents reviewed the skills with their children by reading the stories or watching the videos. Parents also adapted what they learned about Social Stories™ and video modeling from school counselors for home use by putting the videos on an IPad or downloading video modeling examples from the Internet to a computer. Parents used the intervention to prepare their children for novel events such as going to a new school
building, or to describe social skill expectations that might be needed more regularly (e.g., at a grocery store). While the parents had no formal training about these interventions, some shared they sought out information by asking for it from school personnel, attending Autism Society of America meetings and learning from other parents, or by doing their own online research. Because the interventions were used at home and at school, parents felt they were involved with their children’s educational goals. They also could utilize the educational tools the student was familiar with at school in other ways at home. Transferability between home and school environments was a benefit of using the intervention with their students from the parental perspective.

Another reason parents supported the interventions and the research study itself is that they appreciate intervention efforts that support their children with ASD. As parents commented, “it is often a difficulty condition to deal with”, and “public knowledge and education about the autism spectrum is very helpful to make other people understand.” One parent who felt she was unable to comment specifically about the interventions because she had not seen them, was willing to support them anyway, as she wrote “these kids need all the help they can get to succeed in the world!” These strong reactions point to the persistent need for support for families and their children with ASD in schools and through research.

It is not surprising that many of the parents in this study were interested in supporting their children’s learning at both home and school. This finding is similar to the action research of Ditrano and Silverstein (2006), which also found that parents want to be involved in their children’s education, but may need to take initiative with schools to do so. While the Ditrano and Silverstein article along with other research (Dillenburger, Keenan, Doherty, Byrne, & Gallagher, 2010) suggest that it can help for parents to take the initiative with schools, they also suggest that the converse may be true as well. That is, that it may be important for schools to realize the needs of students with ASD at home and support the whole student by working with parents to utilize
interventions at home and school. Dillenburger et al. noted that parents who were trained to deliver Applied Behavior Analysis (ABA) at home were satisfied with their children’s progress. Possibly then, as indicated by this study and previous studies, training parents in using Social Stories™ and video modeling interventions may not only support the objectives of the schools and the goals of the student, but may also support parents as they assist their children at home.

The comments from the parent who was supportive of the research and the interventions although she was not familiar with them, also suggests the need for educators and researchers to act with integrity in offering interventions and in interpreting results of parent surveys and questionnaires. Parents may be looking for support so desperately, that they may be somewhat vulnerable in accepting help in any way. The need for this vigilance in offering sound interventions for this population is evident as discredited and questionable treatments are well-documented (Autism Watch, 2011).

This parent’s comment also may put into question the parental reports on interventions for students with ASD, as parents of children with ASD may be willing to be supportive of any help they are getting for their children. Individuals reading this study should consider that some of the parents in this study were eager for their children to participate, so their perceptions of the interventions potentially could be biased. Even so, readers should also consider that the comments from the parents regarding the study were overwhelmingly positive, and parents seemed to endorse the therapeutic value of the study as well as the mode of delivery of the interventions for their children. In addition, this researcher witnessed the angst from several parents whose children could not participate in the study because of school district policy on school-based research. As others have argued (Herbert, 2008), researchers should be convinced that the ASD population needs their support in the form of translational research and school-based intervention.
Researchers may also want to listen to parental suggestions for intervention modification. In this study, parents shared ideas for modification of the interventions in ways so that they felt their children could most benefit from them. Listening to parental suggestions for intervention modification may benefit educators and researchers, as the ideas presented may be innovations in current interventions for future research initiatives. For instance, parents in this study suggested creating applications for IPods or for IPads that would include elements of Social Stories™ or video modeling so that students could download the applications and use them at any time to learn or be reminded of a skill. Another suggestion was to create animated models of the social skills students are trying to learn for development in younger students. Researchers, like educators, can benefit from working with parents who are the experts in their children’s development to create future research goals. Parental expertise may improve Social Stories™ and video modeling intervention options through research exploration.

**Teacher Support for the Interventions**

Teacher support for the social skills interventions of the study, Social Stories™ and video modeling, was somewhat mixed. Teachers who had a considerable amount of knowledge regarding the interventions were supportive of their use. These teachers found them useful because the students could relate to them, and they provided “multiple ways to access the learner.” It seemed the teachers could use the interventions in their classrooms during “teachable” moments, which was helpful in the “short term.” These teachers also noted that the Social Stories™ and video modeling interventions seemed to help the student with ASD see others’ viewpoints.

Teachers who did not have much knowledge of the interventions chose not to comment on them. One teacher said, “I cannot answer the question. I did not know what the school counselor was doing.” Even though the teachers completed the Vineland-II Teacher Rating Forms to report on the students’ adaptive behaviors before and after the interventions, these teachers’ lack of knowledge regarding the interventions may have
made it difficult for those teachers to use what the students were learning in counseling and apply it to the classroom. As Royer (1997) found, teacher involvement in targeting behaviors leads to a higher likelihood that learned skills will transfer to multiple settings. Lack of teacher awareness or involvement regarding the interventions certainly would made it difficult for them to identify strengths or weaknesses of the interventions. It is also unlikely that these teachers helped the students to use the skills in the classroom that they were learning in individual counseling.

One thing that can be taken away from this finding is that teachers as multidisciplinary team members need to be informed of interventions so that they can evaluate them. Teachers are asked to share their opinions of what is best for students in multidisciplinary team meetings, but cannot do so effectively if they do not know about the interventions being suggested. Another recommendation that can be suggested here is that school counselors may be able to help the student transfer social skills to the classroom by providing teachers with knowledge about the interventions. Collaboration between teachers and school counselors may help teachers use “teachable moments” to reinforce the skills students are learning in counseling. In collaborative efforts, teachers may also be able to inform school counselors and parents as to the interventions that are working and those that are not.

School Counselor Support for the Interventions

Collaboration between school counselors and teachers may also be helpful to teachers, parents, and students. As mentioned in the Findings chapter, school counselors reported that they were regularly called on by teachers and parents to provide services to students with ASD. The school counselors, though, seemed to be saying that they became more committed and more adequately prepared to work with these students after the training. It is possible that the counselors in this study felt they did not have enough training or tools to work with these students before the study.
To work with students with ASD, school counselors identified the importance of adequate training to use the combination Social Stories™ and video modeling intervention. As one counselor wrote, “Having the training gave me the tools to use and a technique to try to better communicate with a student on the spectrum.” Another said, “I feel like the training gave me more applicable knowledge and strategies to try with students and share with teachers and parents.” School counselors can support students with ASD when they have knowledge and skills to work with this specialized population. School counselors also reported that they appreciated the training, but also needed practice in the form of role playing or writing mock Social Stories™ to feel more competent to use the interventions.

The training needs identified by school counselors are an important consideration to draw from this research study. School counselors typically have had limited training in working with students with disabilities, even though they spend a significant amount of time working with students identified for special education support (Dunn & Baker, 2002). Other than an article by Gibbons and Goins (2008), journal articles suggesting interventions for school counselors who may be working with students diagnosed with an autism spectrum disorder have not been published. Simply, if school counselors want to be trained to work with students with ASD, they will need to seek these training opportunities outside of their graduate coursework (Dunn & Baker), and may need to look into trainings targeted for special educators or others who work with students with ASD. Counselor educators should also consider how they can provide training for school counselors-in-training in their graduate programs. With training, school counselors are a valuable resource to parents and teachers to support students with ASD.

The school counselors in this study also do not contest that they should be working with students diagnosed with autism or related disorders. Rather, they report that their assistance has already been solicited. The comments from school counselors suggest the training provided in this study allowed school counselors to play an integral role in
supporting ASD students through leadership and advocacy. The ASCA National Model (American School Counselor Association, 2005) identifies leadership and advocacy as central to the school counselor’s role. These leadership and advocacy efforts include collaborating and consulting with other members of the multidisciplinary team and support staff. It also involves helping students with disabilities receive the educational support they need to be successful. As leaders and advocates, the school counselors were able to use the information provided in the study to help the multidisciplinary team members understand the needs of the ASD population, and unite them in their treatment plan for the students.

Comments from the study also suggest that school counselors’ work with students with ASD fit nicely into the school counselor system of service delivery, including individual and small group counseling. Counselors conveyed that they met individually and in small groups with students with ASD to deliver the social skills intervention. Furthermore, the Social Stories™ and video modeling intervention was reportedly helpful to the school counselors to use for social skills development of students with ASD and other student populations as well.

Possibly, the “useful information” and “tools” helped school counselors to see the potential ways they could support students with ASD. Comments from school counselors in this study suggest they gained knowledge and a stronger skill base after the autism training provided as a part of this study. Even so, the counselors expressed that they felt they needed “more practice”, and continued opportunities to increase their competency with these students. As one counselor said, “I’m hopefully getting better at it as I implement this intervention.” Initially, this researcher hoped to deliver a two-day training to school counselors. Because of time constraints of school counselors and resistance from school districts to allow this much professional development for a research study, the training was shortened. The comments from the school counselors suggest a two-day training may have provided them with more practice they requested at the end of the
study. Ongoing professional development to work with students with ASD seems to be important to the school counselors in this study.

This finding relating specifically to school counselors is associated with their competency with the ASD population. Counselors are called to have a specific set of competencies to work with people with disabilities, as persons with disabilities should be identified as a “unique cultural group” (D’Andrea, Skouge, & Daniels, 2006, p. 5). While the American School Counselor Association states that school counselors should work with all students, it is not evident as to where school counselors should attain this specialized type of training to be competent to work with this unique cultural group. Counselors can examine their own fears, prejudices and myths about a disability population through knowledge acquisition about a specific culture (D’Andrea et al.). D’Andrea and colleagues argue that knowledge may help counselors see possibilities and focus on positive attributes innate in all people with disabilities. To be competent with a specific disability population, then, school counselors need training to acquire this knowledge.

When counselors in this study make comments such as, “I plan to continue my training and understanding of ASD students, as the need is certainly at our school,” they are saying they need training support to be competent to work with this specialized population. So, the counselors in this study reinforce the idea that training focused on working with students with autism helps them to help students diagnosed with ASD in a variety of ways.

Multidisciplinary Team Support for the Interventions

Individualization. Students with Autism Spectrum Disorders have unique and specific needs that must be considered when selecting the appropriate interventions for social skills development. One of these specific needs relates to the idiosyncratic nature of the social-behavioral issues within the autism spectrum disorder population (American Psychiatric Association, 2000). While characteristics of these disorders are identifiable
(American Psychiatric Association), how those characteristics present in each individual is distinctive. So interventions for students on the spectrum most often need to be individually tailored to the preferences or interests of the particular student.

Parents, teachers and school counselors found individualization as one of the strengths of the combination Social Stories™ and video modeling intervention. These specific interventions could be individualized in numerous ways to adapt the intervention to match with specific student preferences. One way the interventions could be adapted was by content. School counselors could write stories or record videos based on the contextual requirements of the school and student. For example, stories could be written about various goal areas from asking someone to play to asking questions in class. Videos could also be adapted in this way, as the scripts were typically created by the school counselors to focus on a particular skill or situation. All of these methods could be personalized to the interests of the students as well.

Multidisciplinary team members also noted that the school counselor could adapt the delivery of the intervention, which allowed them to meet the idiosyncratic needs of the identified student participants. School counselors could write stories, make cartoons, or make videos. They could also modify the video to the preferences or abilities of the student, and utilize video self-modeling or video peer-modeling techniques, both of which have research support (Bellini & Akullian, 2007). As one parent noted, if the interventions are not working, it is important to “find the stop” or the area of concern from the student’s eyes and alter the intervention accordingly. It is also important to identify what seems to be working for a particular student. At times, school counselors in this study felt “the combo was effective”, while other times, “it was better to do one or the other.” The flexibility of the interventions allowed the school counselors to use their professional judgment and responses of the student to adapt and work with each student according to their needs and preferences. Parents also found they could adapt the interventions for learning at home.
**Visual Nature.** Another strength identified by multidisciplinary team members across roles was the visual nature of the intervention. Researchers have commented that students with ASD learn best in visual ways (Ganz, Earles-Vollrath, & Cook, 2011). Teachers, parents and school counselors felt the visual component of the intervention was important. The visual nature allowed counselors to isolate a specific skill, so that the students could watch “someone perform a task that they can’t grasp from just being with people in certain settings.” One parent wrote, “I think the visual nature of the program is key.” Both the Social Stories™, in which the students in this study could read about the skill, and the video modeling, in which the students could watch the video of the skill being modeled, seemed to play to the visual strengths of the ASD students in the study.

**Generalization.** After reading about the skill and watching it being modeled, counselors could work with parents and teachers to help students generalize the skill to various settings such as the classroom, playground, or home environment. One parent suggested that variety is important to make sure “the coping plan is not narrowly applied to one situation.” A school counselor felt the combination intervention gave the student “tools he can use in different situations.”

However, generalization was also a difficulty counselors, teachers, and parents encountered with the interventions. School counselors reported that they “worked on transferring the social story skill into real life examples.” Both teachers and school counselors said that they needed to prompt students to use a specific story in the natural setting at times. One teacher wrote that the Social Stories™ and video modeling interventions “have limited potential because those students [with ASD] are so literal in their own views.” So, while these social skills interventions are adaptable and can be individualized, students with ASD still may have difficulty applying the skill in the setting in which it is needed. Learning ways to help students generalize their learning through these interventions may be an important next step to improve student outcomes.
Developmentally appropriate. Pervasively, multidisciplinary team members commented on the learning engagement of the students in this study. Students enjoyed writing and reading stories about themselves and starring in their own videos. They had “fun” sharing them with others such as teachers, parents and classmates. The engagement of the students suggests the interventions were a developmentally appropriate way to deliver the social skills training. One parent shared that his son had recently developed “a lot more speech and comprehension, so at this time period right now, it is perfect for him to be doing something like that.” Another parent suggested this method “creates a higher level of understanding than simply talking about it.”

Buggey (as cited in Rayner, Denholm & Sigafoos, 2009) would suggest that developmentally appropriate use of video-based interventions is necessary. His suggestion would be that individuals would need to be at least 18 to 24 months old and have the ability to self-recognize to benefit from video-based interventions such as video modeling.

School counselors are trained to identify approaches to working with students that are developmentally appropriate for all students (American School Counselor Association, 2005), including students with disabilities (American School Counselor Association, 2004). Because students with ASD are developmentally delayed as per their diagnoses, it only makes sense that the interventions used with them should be adaptable to the developmental level of the student so that they focus on them. In addition, multidisciplinary team members also shared the opinion that support with social skills development is essential for this population of students.

Repetition. Another essential component of interventions for students with ASD according to participants in this study is repetition. Parents, teachers, and school counselors all noted that repetition helps students retain the skills being taught. One parent noted that repetition helped with visual memory. A teacher in this study supported this idea saying that the videos give students visual reminders. The combination
intervention creates opportunity for practicing the skill, when they read the skill in a Social Story and then also see peers or themselves using the skill in the video. In addition, if the student helps to write the Social Story, or acts in the video the student has additional opportunities to practice the skill.

Parents, teachers, and school counselors in this study seem to be identifying the way in which these social skills interventions work. For example, repetition has long been identified as a method to help students learn and retain knowledge and skills. Researchers have also determined that students with autism spectrum disorders also learn well when learning tasks are repeated (Hess, 2006), especially through various forms of video modeling (Ogilvie, 2011). As these multidisciplinary team members comment about the interventions, they seem to easily identify that repetition is one of the ways in which these social skill interventions work. In addition, their discussion of repetition in relation to visual or verbal cues may be suggesting that the combination intervention not only provides repetition, but may also a priming effect. A priming effect may occur when a stimuli, such as videos or stories in this intervention, produce a future response to a similar stimuli. For example, a video modeling appropriate waiting behavior may be taped in the student’s cafeteria, so when the student with ASD enters the cafeteria (a visual reminder), the student waits in line with his hands to himself. The priming effect has been related to video modeling in recent studies (Sancho, Sidener, Reeve, & Sidener, 2010). Although the multidisciplinary team members do not use the term “priming”, they seem to be eluding this educational practice in their descriptions. So, repetition and a priming effect may be strengths of the combinations social skills intervention for the autism student population.

Collaboration. Collaboration seems to be one of the themes that emerged from the qualitative data across multidisciplinary team member roles. While multidisciplinary team members may not typically have much knowledge about interventions being discussed in teams, it seems the participants in this study appreciated knowing about the
intervention. Parents and teachers who knew about the intervention from the school counselor could reinforce the skills that were being taught in counseling in the classroom and at home. Teachers and parents who were aware of the interventions, or had knowledge of them seemed to comment positively about the interventions, and several mentioned that they were using the interventions in some way in the classroom or at home with the student to prompt the student to use the skills being taught, practice the skills being taught, or generalize the skills to novel situations. When collaboration regarding the interventions was not initiated by the school counselor, multidisciplinary members in both the teacher and parent groups preferred not to comment about the interventions, or gave little comment because they shared that they did not have much knowledge of the interventions themselves. They did not share how they were helping the student use the skills that were being taught at school or at home.

School counselors also shared that the training gave them knowledge they did not previously have, so that they could not only work with students with ASD, but also consult with teachers and parents about students with ASD, and advocate for the students with ASD as well. One consideration for using the Social Stories™ and video modeling intervention, then, is to share knowledge of the intervention with the treatment team so that members can collaborate to help the student with ASD within their specific roles. The comments from the adult participants in this study suggest that collaborative efforts actually make the effect of the interventions stronger. In addition, if teachers and parents do not have knowledge about the interventions, they cannot help the student to use the skills across settings. Further, as a multidisciplinary team, members cannot collaborate effectively to accurately recommend or oppose an intervention for a student throughout the multidisciplinary team process if they have little or no knowledge of it.

These findings in this study corroborate other researchers’ comments on the use of collaboration with the autism population specifically. Gibbons and Goins (2008) identify collaboration as an important role for the school counselor when working with
students with Asperger’s Syndrome (AS). Explicitly, they say, “given the difficulties in social skill development for children with AS, school counselors must work with students, parents, and school staff to help with these issues” (Gibbons & Goins, p. 2). Collaboration in intervention delivery also helps to improve student outcomes (Hoover & Love, 2011), especially when someone other than the classroom teacher is delivering the intervention. Unfortunately, collaboration is not always utilized effectively because families may not understand the point-of-view of educational professionals, and educational professionals may not always understand the perspectives and demands on parents of students with disabilities (Ditrano & Silverstein, 2006; Dillenburger, Keenan, Doherty, Byrne, & Gallagher, 2010).

Vineland-II Teacher Rating Form Data

The Vineland-II Teacher Rating Forms were completed by classroom teachers of the student participants before and after the social skills interventions were delivered over the course of the semester. Domain scores and Composite scores from the V-II TRF indicate that the interventions were not statistically significant in showing positive behavior change on the Adaptive Behavior Scale. This finding could suggest the interventions did not improve students’ social behavior. However, this finding may be disputable for two main reasons. First, the power of this statistical analysis is low because of the small sample size of this study. Replicating the study with a larger sample size would be more conclusive in regard to the efficacy of the interventions in changing social behavior in students with ASD.

Another consideration is the use of the measure as related to the targeted behavioral goals for the students. School counselors were able to identify social behavior goals to target during the course of the intervention. Most of the time, the goals identified were very specific. While authors of the Teacher Rating Form of the Vineland-II Adaptive Behavior Scales contend that the scales can be used to measure behavior changes in research studies such as this one, adaptive behavior is a broad construct. As
such, specific behavior changes may not be detectable with this rating form, especially over short intervals. For this study with a small subject sample, single subject design recording increases or decreases of specific behavior may have been a more effective way of measuring social behavioral change in these student participants.

While the data from the Vineland-II Teacher Rating Form did not show statistically significant changes in adaptive behavior, small clinical significant differences were found when effect sizes were analyzed. This clinical significance suggests the treatment intervention did collectively cause a small decrease in the severity of the student participant’s adaptive composite scores, and the communication score domain. Moderate effect sizes in students’ daily living skills scores suggest the interventions had the most impact on this domain of the Adaptive Behavior score. Limitations of these findings are discussed in the next section.

**Limitations of the Interpretation**

Three adult participant groups and their respective comments make up this Qualitative Criticism. Fifteen multidisciplinary team members commented on the social skills interventions in this study. Of these team members, five were teachers, six were parents, and five were school counselors. For a Qualitative Criticism, this is a sound number of participants. Still, the number of participants for each role is limited, and at times, members did not have much information to share about the interventions. So, the number or participants per group should be taken into account when considering the discussions for each of the multidisciplinary groups.

Another limitation of the study is the lack of consistency in intervention delivery. School counselors who participated in the study were expected to use the training and their professional judgment to benefit the respective student participant in ways they thought fit best with the student’s needs. This researcher allowed flexibility in protocol to permit school counselors to be responsive to the varying needs of the student participants in targeting goals, designing content, and delivering the intervention. This flexibility also
allowed for considerations of the school counselors’ and students’ schedules. The combination Social Stories™ and video modeling interventions were delivered to each student at least five times, but could vary in frequency beyond 5 sessions, and also could differ in duration throughout the semester of the study. This is a limitation because the descriptions from the multidisciplinary team members could be based not only on the interventions themselves, but also on how the interventions were delivered which varied for each case in this study.

An additional limitation that should be mentioned is that the perceptions of the multidisciplinary team members could be biased regarding the interventions. For example, in an earlier discussion this researcher noted that a parent was supportive of the intervention even when she shared that she did not know much about it specifically. As Eisner suggested, a Qualitative Criticism is subjective, and identifies the connoisseur (in this case the adult participants) as the experts. This idea comes into question when the participant is not really aware of the interventions, as well as when the expert (i.e., the school counselor) has been taught the intervention by the researcher.

As mentioned previously, the quantitative data from the Vineland-II Teacher Rating Form were primarily used as a method to triangulate the findings from the multidisciplinary team members. It is difficult to find statistically significant relationships in the data with a small sample size, so the results from the V-II TRF are not good indicators of the effectiveness of the interventions. The age range of the participants also may have affected the findings.

**Summary of the Qualitative Criticism**

Multidisciplinary team members seem to support the use of the combination Social Stories™ and video modeling intervention for students with Autism Spectrum Disorders for several reasons. The combination intervention is useful in a variety of situations, and is flexible enough to modify to the particular preferences of each individual student. Parents could use the intervention at home, and teachers could support
the use of it in classrooms with prompts or visual cues. School counselors felt the intervention fit well into their comprehensive school counseling programs, and it was useful in their role with students with ASD. They also felt the training was helpful to their work with students on the spectrum, although some desired more training.

The intervention was considered to be developmentally appropriate for students from Pre-Kindergarten through middle school. Students were actively engaged in the interventions and enjoyed participating in the story writing, cartoon making, and video production. The interventions also were conducive to giving students repeated practice, or repetition of the target skill. The visual nature of the interventions was identified as an asset, because visual learning has been acknowledged as a strength typical of students with ASD.

Multidisciplinary team members were concerned about the generalizability of the skills the students were learning in counseling to the setting in which the skill was needed. At times, team members were not aware of the interventions so they could not support the student in their roles as teachers and parents. Increasing collaborative efforts may be one way to improve generalizability of the skill, and student outcomes.

**Future Directions**

While much research has been done about Social Stories™ (Gray, 1985; Chan, 2008) and video modeling (Bellini, Akullian, & Hopf, 2007; Scattone, Tingstrom, & Wilczynski, 2006), a quantitative, school-based study of these interventions is needed with a larger sample size to more adequately determine if these interventions are effective with this population when the intervention is delivered by a school counselor. In a study of this nature, controlling for time, session number, and goals would decrease the limitations of the study. In addition, this researcher noticed that students whose multidisciplinary team members reported more collaboration seemed to do better on the Vineland-II TRF, and team members seemed to have more positive things to say about the intervention. A future study of these interventions in which the independent variable
is collaboration may tell this researcher if collaboration does have an additive effect on the intervention outcomes.

More research on school counselor competency with the ASD student population is desirable to determine what more school counselors need from Counselor Educators or school districts in the form of education or training. At this time, this study would suggest some training helps, but this researcher would advocate for more intensive training to provide school counselors with not only knowledge and awareness, but also skill practice using specific research-based interventions.

Finally, researchers may benefit from taking the suggestions of parents to adapt Social Stories™ and video modeling for use on current technological devices such as the IPad or IPod. Additionally, researchers can also be responsive to parental needs, as these parents’ support of research of interventions for their children is evident. They value school-based research and efforts to expand society’s understanding of the ASD. With the increase in prevalence of these disorders, transformative research can bring intervention to students who need support while expanding societal understanding of the disorders and effective interventions to assist children and families.

Conclusion

One parent wrote about what her son got out of the opportunity to work with the school counselor in his school as a part of this research study. The parent disclosed, “‘Brennan’ told me that the most important thing he learned was to be himself. Thank you!!” This type of sentiment mirrors Temple Grandin’s comments in her interview in the Penn State Collegian. School counselors can deliver interventions to students with autism spectrum disorders so that these students can continue to “be themselves” and be successful in school settings. In every case in this study, comments were made from parents, teachers or school counselors about the positive impact on the individual students in this study on their social behavioral development.
The comment Brennan’s mother shared, and others that were similar in this study make this study very meaningful and worthwhile to this researcher. Perceptions shared by school counselors during and after the training reiterate the importance of school-based studies and additional training needs to work with students with ASD. Despite the difficulty to navigate research studies within schools because of research regulations, school policy, and school personnel’s workloads, this researcher finds school-based research necessary for student and faculty development, valuable for families, and rewarding for researchers.

This researcher was genuinely honored to work with the families, teachers, and school counselors in this study, and to hear their perceptions of the interventions. Clearly, as a multidisciplinary team, the participants in this study support the delivery of the Social Stories™ and video modeling intervention by school counselors in schools for the social behavior development of students previously diagnosed with Autism Spectrum Disorders.
REFERENCES


APPENDIX A

PERVASIVE DEVELOPMENT DISORDERS

GRAPHICAL EXPLANATION
Figure A1. Pervasive Developmental Disorders

Pervasive Developmental Disorders
Characterized by severe and pervasive impairment in several areas of development in what is known as the triad of impairment:
1) reciprocal social interaction skills,
2) communication skills, or
3) the presence of stereotyped behavior, interests, and activities
(American Psychiatric Association, 2009)

Autism Spectrum Disorders
A term used by medical and educational practitioners to refer to Autistic Disorder, Asperger’s Syndrome and PDD-NOS. This group of disorders has similar features; however, individuals may have mild to serious symptoms, or may not meet all of the criteria of autistic disorder (see below).

Autistic Disorder
- impairment in reciprocal social interaction is gross and sustained
- impairment in communication is marked and sustained verbally and nonverbally
- stereotypy including preoccupation of interests, inflexibility and insistence on sameness.

Asperger’s Syndrome
- same features as Autistic Disorder
- except for lack of delay or deviance in early language development and
- no clinically significant delays in cognitive development in the first 3 years of life.

Pervasive Developmental Disorder - Not Otherwise Specified
- should be used when there is a severe and pervasive impairment in the development of reciprocal social interaction associated with impairment in either verbal or nonverbal communication skills, or
- the presence of stereotyped behavior, interests, and activities, but
- criteria are not met for a specific Pervasive Developmental Disorder.

Childhood Disintegrative Disorder
- distinctive, severe developmental regression in multiple areas of functioning
- following at least 2 years of normal development.

Rhett’s Disorder
- diagnosed only in females,
- characteristic pattern of head growth deceleration,
- loss of previously acquired purposeful hand skills,
- appearance of poorly coordinated gait.

*content from the Diagnostic and Statistical Manual of Mental Disorders – Text Revised.
(American Psychiatric Association, 2008)
APPENDIX B
SOCIAL STORY EXAMPLE
This is an example of a Social Story that can be used with a student who is having difficulty understanding changes in routine for recess.

**Outdoor or Indoor Recess**

After lunch we go to recess.

Sometimes recess is outside on the playground.

Sometimes recess is inside in the classroom.

When recess is outside, we can play on the playground equipment.
We can play with other children on the playground equipment.
Everyone should play safely.
When the whistle blows that means it is time to line up and go inside.

When recess is inside, we can play in the classroom with the games on the silver shelves.
We can play these games with other children.
When we take turns using the games, children might think we are nice.
When the whistle blows that means it is time to pick up the games and go to our seats.
APPENDIX C

CARTOON-FORMATTED SOCIAL STORY
This cartoon is an example of a Social Story used in a cartoon format. This Social Story is written for a child who does not like to wear a hat in the winter at recess.
APPENDIX D
OUTLINE OF SCHOOL COUNSELOR TRAINING SCHEDULE
School Counselor Training Day Outline – Combination Intervention

Introductions
Part I: (8:00-8:30) Research Discussion
A. School counselors take the pre-test
B. Talk about research integrity
   1. Walk through directions for opening a Wiki site for questions
   2. Discuss importance of notifying PI if there are any concerns or problems with delivering the treatment protocol.
C. Discuss following the human subjects research guidelines in the CITI training
   1. Parents have already completed informed consent
   2. Students and/or parents have the right to discontinue at any time
   3. School counselors and school superintendents (site authorization) have the right to discontinue the study at any time
   4. No compensation except free training and NBCC CEUs, if interested

Part II: (8:30-9:30) Autism Overview
1. Go through presentation on myths and basics about autism spectrum disorders
3. Discuss individual questions about the needs of students with ASD

Break (9:30-9:45)

Part III: (9:45-11:00) Intervention Session
1. Social Stories
   a. Purpose of Social Stories
   b. Social Stories Recipe
   c. Examples of Social Stories, including ToonDoo website
   d. Non-examples of Social Stories

11:00-12:00 PM Lunch on your own

Part IV: (12:00-1:30 PM) Intervention Session
a. Purpose of Video Modeling
b. Creating Videos
   i. videos of peers; instructor
   ii. video self-modeling
   iii. point-of-view video modeling

Part V: (1:30-2:00 PM) Keeping Records
a. Session Records
b. Administering the Vineland II to teachers
c. Unusual Circumstances

Part VI: (2:00-4:00PM) CITI Training
https://www.citiprogram.org/default.asp
APPENDIX E

INFORMED CONSENT DOCUMENT FOR

STUDENT SUBJECTS
INFORMED CONSENT DOCUMENT

Project Title: Sustainability of Social Behavior Changes in Elementary Children with Autism: A School Counseling Based Comparison of Social Stories TM and Video Modeling Interventions

Principal Investigator: Dawnette Cigrand, A.B.D.; Professional School Counselor; Doctoral Candidate, University of Iowa.

Research Team Contact: You may contact Dawnette Cigrand at 319-335-6148 or by email at dawnette-cigrand@uiowa.edu or Dr. Nick Colangelo at 319-335-6150 or by email at nicholas-colangelo@uiowa.edu with questions, concerns, or problems regarding this study.

If you are the parent/guardian of a child under 18 years old who is being invited to be in this study, the word “you” in this document refers to your child. You will be asked to read and sign this document to give permission for your child to participate.

This consent form describes the research study to help you decide if you want to participate. This form provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights as a research subject.

- If you have any questions about or do not understand something in this form, you should ask the research team for more information.
- You should discuss your participation with anyone you choose such as family or friends.
- Do not agree to participate in this study unless the research team has answered your questions and you decide that you want to be part of this study.

WHAT IS THE PURPOSE OF THIS STUDY?
This is a research study. We are inviting you to participate in this research study because you are an elementary student who has been diagnosed with Autism Spectrum Disorder such as autism, Asperger’s Syndrome, or Pervasive Developmental Disorder, Not Otherwise Specified. The purpose of this research study is to provide a 10-week school counseling intervention to students with an Autism Spectrum Disorder (ASD) in schools to determine if the intervention improves social behavior after the intervention, and to determine if any positive effects of the intervention last four weeks after the intervention has ended.

HOW MANY PEOPLE WILL PARTICIPATE?
Approximately 100 elementary students will take part in this study at various schools in the Midwestern United States.

HOW LONG WILL I BE IN THIS STUDY?
If you agree to take part in this study, your involvement will last for 10 weeks:
Each participant will have 10 counseling sessions with a school counselor over the course of 10 weeks. Each of these counseling sessions will be approximately 1 hour in length. A classroom teacher will be filling out the Vineland II Teacher Rating Form about your behavior in school before the counseling intervention begins, and then again after the 10 weeks of counseling are over. One more rating form will be filled out 4 weeks after the end of the intervention to determine if any changes were sustained. This teacher will be someone with whom you have class on a regular basis.

WHAT WILL HAPPEN DURING THIS STUDY?

- As a part of the study, you will take part in individual counseling using one of three social skills interventions specifically used with students with ASD. The three interventions that are being studied are Social Stories, Video modeling and a combination intervention of Social Stories and Video modeling.
- Some of the students will be placed in a control group based on geographic region. The researcher will collect data on this group without the intervention. Then, following the study, the members of this group will be given the results of the intervention and will be able to choose which intervention, if any, they would like to enroll in.
- The school counselor, who has a Masters’ degree in education, will be trained in the intervention by the researcher.
- Then, the teacher will be asked to fill out the Vineland II Teacher Rating form to determine your current social behavior in the classroom.
- Then, the school counselor will collaborate with your teacher and parents to determine what social skills would be beneficial to your success in school. This group of people is called the treatment team.
- The researcher will assign you to one of the following interventions: Social Stories, Video modeling or the Social Stories/Video modeling Combination intervention. After the treatment team decides what social skills to focus on with you, you will meet with the school counselor to learn and practice the social skills through the intervention assigned to you. These counseling sessions will occur once a week for 10 weeks. Each session will be about 1 hour long, and will include some free time to get to know the counselor, some time to learn about the skill with the assigned intervention and some practice time to use the skill.

- The subject will be asked to attend and participate in all of the 10 counseling sessions.
  - These sessions will primarily take place in the counselor’s office; however, the counselor may elect to practice the social skills in the setting in which the social skill is needed (e.g., the school cafeteria, the classroom, the school hallway or playground) if it is convenient to do so, and if you agree to do so.
  - If you are currently participating in another social behavior
intervention, you may choose to: 1) wait until that intervention is over to participate in this study, 2) discontinue the current intervention to try one of the interventions in this study, OR 3) not participate in this study.

**Audio/Video Recording or Photographs**

One aspect of this study involves making videos of you. The school counselor will be asked to video tape 2-3 sessions of your counseling sessions so that the researcher can ensure that the intervention was delivered by the school counselor in the way they were trained to do.

If you are assigned to the video modeling intervention or the Combination intervention, you may be asked by the school counselor to participate in making videos in which you practice the skills you are working on. Other times, you may be watching videos about other students demonstrating the skills you are working on. Please mark the following statement with yes or no if you agree or disagree to be videotaped for the purpose of learning social skills and to monitor the counselor’s intervention delivery. If you choose not to participate in the video recording, you may be assigned to a treatment group that does not require video recordings, or you may not be eligible for this study.

[ ] Yes  [ ] No  I give you permission to make video recordings of me during this study.

**WHAT ARE THE RISKS OF THIS STUDY?**

You may experience one or more of the risks indicated below from being in this study. In addition to these, there may be other unknown risks, or risks that we did not anticipate, associated with being in this study.

- Because you will be asked to attend counseling sessions for 1 hour per week for 10 weeks, one risk of this study is that you will miss some other school activities or class events, depending on when the treatment team decides is the best time for the counseling session. Counselors who collaborate with this study will be encouraged to choose times that have minimal impact on your academic progress.

- Another risk of this study is that you may feel uncomfortable at first because the counselor may be asking you to try new things, and practice skills that you may have not used before.

**WHAT ARE THE BENEFITS OF THIS STUDY?**

We do not know if you will benefit from being in this study. However, some case studies of individuals with Autism Spectrum Disorders have shown that some students who have participated in these interventions have demonstrated improvements in social behavior.
In addition, we hope that, in the future, other people might benefit from this study because it may help educators and other families of students with disabilities to decide if any or all of the three interventions in this study should be used with their children. It may also help school counselors determine what types of interventions would be most beneficial for children with Autism Spectrum Disorders who need support with social behavior in schools.

**WILL IT COST ME ANYTHING TO BE IN THIS STUDY?**
You will not have any costs for being in this research study.

**WILL I BE PAID FOR PARTICIPATING?**
You will not be paid for being in this research study.

**WHO IS FUNDING THIS STUDY**
The University and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

**WHAT ABOUT CONFIDENTIALITY?**
We will keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people such as those indicated below may become aware of your participation in this study and may inspect and copy records pertaining to this research. Some of these records could contain information that personally identifies you.

- federal government regulatory agencies,
- auditing departments of the University of Iowa, and
- the University of Iowa Institutional Review Board (a committee that reviews and approves research studies)

To help protect your confidentiality, we will password protect any databases created for organizing data collected from this study. In addition, we will keep any paper copies of data in a locked storage cabinet with access only permitted to the research team members. School counselors collaborating with this study are expected to protect your confidentiality in school based on laws requiring them to do so. They will only share information with the research team if you agree to participate in this study. If we write a report or article about this study or share the study data set with others, we will do so in such a way that you cannot be directly identified.

**IS BEING IN THIS STUDY VOLUNTARY?**
Taking part in this research study is completely voluntary. You may choose not to take part at all. If you decide to be in this study, you may stop participating at any time. If you decide not to be in this study, or if you stop participating at any time, you will not be penalized or lose any benefits for which you otherwise qualify.

**What if I Decide to Drop Out of the Study?**
If you leave the study early, you may or may not get the complete intervention.
If you decide to leave the study early, we will ask you to contact the researcher by phone or email who will in turn contact the school counselor to discontinue individual counseling sessions using the interventions described in this consent document. You and the school counselor may or may not elect to continue individual counseling without using these interventions, but no data will be collected about you once you withdraw from the study. **Again, there are no consequences if you decide to discontinue participation in this study.**

**Will I Receive New Information About the Study while Participating?**
If we obtain any new information during this study that might affect your willingness to continue participating in the study, we will promptly provide you with that information.

The only situation in which participation may be terminated without your consent is if the school counselor decides to withdraw from participation in this study for reasons not anticipated by the researcher.

**Can Someone Else End my Participation in this Study?**
Under certain circumstances, the researchers might decide to end your participation in this research study earlier than planned. This might happen because the treatment team determines that you are not cooperatively participating or your level of feeling uncomfortable outweighs any potential benefits to you.

**WHAT IF I HAVE QUESTIONS?**
We encourage you to ask questions. If you have any questions about the research study itself, please contact: If you experience a research-related injury, please contact Dawnette Cigrand at 319-335-6148 or by email at dawnette-cigrand@uiowa.edu or Dr. Nick Colangelo at 319-335-6150 or by email at nicholas-colangelo@uiowa.edu.

If you have questions, concerns, or complaints about your rights as a research subject or about research related injury, please contact the Human Subjects Office, 340 College of Medicine Administration Building, The University of Iowa, Iowa City, Iowa, 52242, (319) 335-6564, or e-mail irb@uiowa.edu. General information about being a research subject can be found by clicking “Info for Public” on the Human Subjects Office web site, http://research.uiowa.edu/hso. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above.

This Informed Consent Document is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You are not waiving any legal rights by signing this Informed Consent Document. Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.
Subject's Name (printed): __________________________________________________

Do not sign this form if today’s date is on or after December 1, 2010.

(Signature of Subject) (Date)

Parent/Guardian or Legally Authorized Representative’s Name and Relationship to Subject: ____________________________________________ (Name - printed)
________________________________________________________________________ (Relationship to Subject - printed)

Do not sign this form if today’s date is on or after December 1, 2010.

(Signature of Parent/Guardian or Legally Authorized Representative) (Date)

Legally Authorized Representative:
In studies conducted in the state of Iowa, the first person on the list below who is reasonably available and competent must sign as the legally authorized representative even if another person on the list is more conveniently available.

1. The designated proxy (such as a Durable Power of Attorney for Health Care)
2. Court-appointed guardian
3. Spouse (does not include “Common-law” spouse)
4. Adult child
5. Parent
6. Adult sibling

Statement of Person Who Obtained Consent
I have discussed the above points with the subject or, where appropriate, with the subject’s legally authorized representative. It is my opinion that the subject understands the risks, benefits, and procedures involved with participation in this research study.

(Signature of Person who Obtained Consent) (Date)
APPENDIX F

DEMOGRAPHIC QUESTIONNAIRE
Parent Demographic Questionnaire

Thank you for taking the time to fill out the questionnaire about your student who will participate in the research study investigating the Sustainability of Social Behavior Changes of Elementary Children with Autism Spectrum Disorders. The information you share on this questionnaire will help the researcher determine the eligibility of your student for the study, as well as allow the researcher to describe the group of students that are participating in this study. All information you share will be kept confidential. At no time will any information that can identify your student directly will be used. Remember, taking part in this study is completely voluntary, so you can choose to quit at any time. While it would be most helpful for purposes of the study for you to complete the entire questionnaire, you may choose to skip any items that you do not feel comfortable answering. Please contact Dawnette Cigrand at dawnette-cigrand@uiowa.edu or Dr. Nicholas Colangelo at nicholas-colangelo@uiowa.edu if you have any questions about this form. They can also be reached at 319-335-6148. Thank you very much for your time.

Student Demographic Information

Name of the Person Completing this Form:

____________________________________________________________________

Address:

____________________________________________________________________

Phone Number: _________________________ Email

____________________________________________________________________

Address: ______________________________

Relationship to the Student:

____________________________________________________________________

Student First Name: ______________________ Last Name: ______________________

Student Birth date: ____________ Student Age at Time of Study:______ Current Grade: ______

School District Attending:

____________________________________________________________________

Check all of the following that applies to your student:

Gender: ______ Male ______ Female ______ Transgender

My student has been diagnosed with:

_____Autism

_____Asperger’s Syndrome or Asperger’s Disorder

_____Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS)

_____Rhett’s Disorder
_____ Childhood Disintegrative Disorder  
_____ Mental Retardation  
_____ Other, please specify__________________________________________

This diagnosis was made by a:
_____ medical doctor  
_____ psychologist  
_____ psychiatrist  
_____ unsure, please state the person’s name_________________________________________

Currently, my student has the following supports at school:
_____ an Individualized Education Plan (IEP) or is in Special Education  
_____ a 504 plan  
_____ a Behavior Intervention Plan  
_____ an associate or para-educator who is regularly assigned to support my student  
_____ speech/language therapy  
_____ school counseling support  
_____ support from a gifted program or teacher (e.g., ELP, TAG)  
_____ other, please specify______________________________________________  
_____ None of the above

Currently, my student is in the integrated into the general education classroom for:
_____ the full school day  
_____ math  
_____ reading  
_____ language arts activities  
_____ science  
_____ social studies/geography/history  
_____ specials (e.g., art, music, physical education)  
_____ other________________________________

Please provide the name of your student’s school counselor, if known:
________________________________________________________________________

Please provide the name of a regular education teacher with whom your child attends class:
________________________________________________________________________

What, if any, specific social behaviors would you like your student to work on with the school counselor during this study (if the school district and school counselor are willing to be involved in the study)?
________________________________________________________________________
APPENDIX G

QUESTIONNAIRE FOR PARENTS
Qualitative Questions for Parents

1. How do the video modeling and Social Stories interventions meet the needs of students diagnosed with Autism Spectrum Disorders?

2. How do these Social Skills strategies (i.e., the video modeling and Social Stories) have the potential for working with students diagnosed with ASD?

3. What would you tell other parents, teachers, or school counselors about the video modeling intervention?

4. What would you tell other parents, teachers, or school counselors about the Social Stories intervention?

5. What critiques do you have of these Social Skills interventions (i.e., Social Stories and video modeling)?

6. If you have additional comments, feel free to add them here. Thank you for filling out this questionnaire!
APPENDIX H

QUESTIONNAIRE FOR TEACHERS
Qualitative Questions for Teachers

1. How do video modeling and Social Stories interventions meet the needs of students diagnosed with Autism Spectrum Disorders in your classroom?

2. How do these Social Skills strategies (i.e., the video modeling and Social Stories) have the potential for working with students diagnosed with ASD?

3. What would you tell parents or other teachers about the video modeling intervention?

4. What would you tell parents or other teachers about the Social Stories intervention?

5. What critiques do you have of these Social Skills interventions (i.e., Social Stories and video modeling)?

6. If you have additional comments, feel free to add them here. Thank you for filling out this questionnaire!
APPENDIX I

QUESTIONNAIRE FOR SCHOOL COUNSELORS
Qualitative Questions for School Counselors

1. In what ways did the training you attended on Autism Spectrum Disorders, video modeling, and Social Stories impact your comprehensive school counseling program?

2. How do these Social Skills strategies (i.e., the video modeling and Social Stories) have the potential for working with students diagnosed with ASD?

3. Did you feel the Social Skills training adequately prepared you to work with students with autism spectrum disorders? Why or why not?

4. What would you tell school counselors about working with students diagnosed with an Autism Spectrum Disorder?

5. If you used the training with students with ASD, have students’ social behavior changed since you started working with the student in counseling? If so, how?

6. Specifically regarding the video modeling intervention, what types of responses regarding this intervention have you seen from students with ASD since you have worked with them in counseling?

7. What would you tell school counselors about using the video modeling intervention?

8. Specifically regarding the Social Stories intervention, what types of responses have you seen from students with ASD from this intervention since you have worked with them in counseling?

9. What would you tell school counselors about using the Social Stories intervention?

10. When you used both interventions in combination, what did you note about how they worked together regarding the social skills development of students with ASD?

11. If you have additional comments, feel free to add them here. Thank you for filling out this questionnaire!
APPENDIX J
LETTER TO PARENTS CONTAINING ELEMENTS OF CONSENT
Date

Inside Address

Dear Parent:

We are writing to invite you to participate in a research study to collect additional information for my study about interventions for students with Autism Spectrum Disorders. The purpose of the study is to describe, interpret and evaluate the practical use of the combination of the Social Stories and video modeling interventions with students with Autism Spectrum Disorders (ASD) in schools from the perspectives of the school counselors, teachers and parents of these students.

We are inviting you to be in this study because you are a parent of a student diagnosed with an Autism Spectrum Disorder who recently received the Social Stories and video modeling interventions. We obtained your name and address from my list of parents who filled out consent forms for their children who participated in the first part of the study. Because of the low numbers of students enrolled in the study, this researcher needs to collect additional data to complete her dissertation. Approximately 40 people will take part in this second phase of the study at the University of Iowa.

If you agree to participate, we would like you to fill out the attached enclosed questionnaire containing 5 questions about your perceptions of these the Social Stories and video modeling interventions. You may skip any questions you do not wish to answer. It will take approximately 20 minutes to complete the questionnaire and return the questionnaire in the enclosed self-addressed stamped envelope. Please return the questionnaire in the next 3 weeks. If the researcher has not received it in three weeks, she will call you to determine if you have any questions about the study or the questionnaire, and to determine your intention to participate in the study or not. If you do not want to participate in the study, simply discard the questionnaire and inform the researcher when she calls or return a blank survey to the researcher.

We will keep the information you provide confidential; however, federal regulatory agencies and the University of Iowa Institutional Review Board (a committee that reviews and approves research studies) may inspect and copy records pertaining to this research. You may note a number at the top of the attached questionnaire, this number allows you to mail back the questionnaire confidentially without your name attached. Do not place your name or any identifying information on the questionnaire or the return envelope. The researcher has kept a list with your contact information that corresponds to this number for identification purposes. If we write a report about this study, we will do so in such a way that you cannot be identified.

There are no known risks from being in this study, and you will not benefit personally. However we hope that others may benefit in the future from what we learn as a result of this study.

You will not have any costs for being in this research study. You will not be paid for being in this research study.

Taking part in this research study is completely voluntary. If you decide not to be in this study, or if you stop participating at any time, you will not be penalized or lose any benefits for which you otherwise qualify.
If you have any questions about the research study itself, please contact Dawnette Cigrand, 319-465-5724, or by email at dawnette-cigrand@uiowa.edu or Dr. Nick Colangelo, professor, 319-335-6150, or by email at nick-colangelo@uiowa.edu. If you experience a research-related injury, please contact the same researchers above. If you have questions about the rights of research subjects, please contact the Human Subjects Office, 105 Hardin Library for the Health Sciences, 600 Newton Rd, The University of Iowa, Iowa City, IA 52242-1098, (319) 335-6564, or e-mail irb@uiowa.edu. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above.

Thank you very much for your consideration. Signed consent is not needed for participation in this study; simply return the attached your questionnaire in the accompanying self-addressed stamped envelope to indicate your agreement to participate.

Sincerely,

Dawnette Cigrand, ABD
Professional School Counselor
Doctoral Candidate, University of Iowa
APPENDIX K

EMAIL TO TEACHERS CONTAINING ELEMENTS OF CONSENT
EMAIL SUBJECT LINE: Research Study: Invitation to Participate

Date

Inside Address

Dear Teacher:

We are writing to invite you to participate in a research study to collect additional information for my study about interventions for students with Autism Spectrum Disorders. The purpose of the study is to describe, interpret and evaluate the practical use of the combination of the Social Stories and video modeling interventions with students with Autism Spectrum Disorders (ASD) in schools from the perspectives of the school counselors, teachers and parents of these students.

We are inviting you to be in this study because you are a teacher who worked with a student diagnosed with an Autism Spectrum Disorder who recently received the Social Stories and video modeling interventions. We obtained your name and address from a list of teachers provided by parents who filled out consent forms about their students with ASD who participated in the first part of the study. Because of the low numbers of students enrolled in the original study, this researcher needs to collect additional data to complete her dissertation. Approximately 40 people will take part in this second phase of the study at the University of Iowa.

Participation involves completing a 5-item questionnaire about your perceptions of these Social Stories and video modeling interventions. You may skip any questions you do not wish to answer. It will take approximately 20 minutes to complete the questionnaire and submit it. If you plan to participate, please complete this questionnaire in the next 3 weeks. If you agree to participate, simply copy and paste the attached link into your computer’s browser: https://winona.qualtrics.com/SE/?SID=SV_es8DND9lzyQQkRe and complete the questionnaire. The first question will ask for your code number used to confidentially identify you, which is __________. If the researcher has not received it in three weeks, she will call you to determine if you have any questions about the study or the questionnaire, and to determine your intention to participate in the study or not. If you do not want to participate in the study, simply discard this email and inform the researcher when she calls.

We will keep the information you provide confidential; however, federal regulatory agencies and the University of Iowa Institutional Review Board (a committee that reviews and approves research studies) may inspect and copy records pertaining to this research. We will use the code number provided above and not your name to identify your responses. The researcher has kept a list with your contact information that corresponds to this number for identification purposes. If we write a report about this study we will do so in such a way that you cannot be identified.

You will be asked to provide information over the Internet. Information provided via the internet may be viewed by individuals who have access to the computers where the information is collected or stored or used by the study site for their own purposes. It is also possible that your responses could be viewed by unauthorized persons. We will use a secure web site to collect the study information and password protected computers to store the study information. You will not benefit personally. However we hope that others may benefit in the future from what we learn as a result of this study.
You will not have any costs for being in this research study. You will not be paid for being in this research study.

Taking part in this research study is completely voluntary. If you decide not to be in this study, or if you stop participating at any time, you will not be penalized or lose any benefits for which you otherwise qualify.

If you have any questions about the research study itself, please contact Dawnette Cigrand, 319-465-5724, or by email at dawnette-cigrand@uiowa.edu or Dr. Nick Colangelo, professor, 319-335-6150, or by email at nick-colangelo@uiowa.edu. If you experience a research-related injury, please contact the same researchers above. If you have questions about the rights of research subjects, please contact the Human Subjects Office, 105 Hardin Library for the Health Sciences, 600 Newton Rd, The University of Iowa, Iowa City, IA 52242-1098, (319) 335-6564, or e-mail irb@uiowa.edu. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above.

Thank you very much for your consideration. Signed consent is not needed for participation in this study; submitting the questionnaire is evidence of your consent.

Sincerely,

Dawnette Cigrand, ABD  
Professional School Counselor  
Doctoral Candidate, University of Iowa
APPENDIX L

LETTER TO SCHOOL COUNSELORS CONTAINING ELEMENTS OF CONSENT
Dear School Counselor:

We are writing to invite you to participate to collect additional information for my study about interventions for students with Autism Spectrum Disorders. The purpose of the study is to describe, interpret and evaluate the practical use of the combination of the Social Stories and video modeling interventions with students with Autism Spectrum Disorders (ASD) in schools from the perspectives of the school counselors, teachers and parents of these students.

We are inviting you to be in this study because you are a school counselor who attended training on Social Stories and video modeling to work with students diagnosed with Autism Spectrum Disorders. We obtained your name and address from the list that was compiled containing information from the consent forms parents filled out about their respective students, which was a list of school counselors who attended the training sessions. Because of the low numbers of students enrolled in the original study, this researcher needs to collect additional data to complete her dissertation. Approximately 40 people will take part in this second phase of the study at the University of Iowa.

If you agree to participate, we would like you to fill out the attached enclosed questionnaire containing 9 questions about your perceptions of these Social Stories and video modeling interventions. You may skip any questions you do not wish to answer. It will take approximately 20 minutes to complete the questionnaire, and return the questionnaire in the enclosed self-addressed stamped envelope in the next 3 weeks. If the researcher has not received it in three weeks, she will call you to determine if you have any questions about the study or the questionnaire, and to determine your intention to participate in the study or not. If you do not want to participate in the study, simply discard the questionnaire and inform the researcher when she calls or return a blank survey to the researcher.

We will keep the information you provide confidential; however, federal regulatory agencies and the University of Iowa Institutional Review Board (a committee that reviews and approves research studies) may inspect and copy records pertaining to this research. You may note a number at the top of the attached questionnaire, this number allows you to mail back the questionnaire confidentially without your name attached. Do not place your name or any identifying information on the questionnaire or the return envelope. The researcher has kept a list with your contact information that corresponds to this number for identification purposes. If we write a report about this study we will do so in such a way that you cannot be identified.

There are no known risks from being in this study, and you will not benefit personally. However, we hope that others may benefit in the future from what we learn as a result of this study. You will not have any costs for being in this research study. You will not be paid for being in this research study.

Taking part in this research study is completely voluntary. If you decide not to be in this study, or if you stop participating at any time, you will not be penalized or lose any benefits for which you otherwise qualify.

If you have any questions about the research study itself, please contact Dawnette Cigrand, 319-465-5724, or by email at dawnette-cigrand@uiowa.edu or Dr. Nick
Colangelo, professor, 319-335-6150, or by email at nick-colangelo@uiowa.edu. If you experience a research-related injury, please contact the same researchers above. If you have questions about the rights of research subjects, please contact the Human Subjects Office, 105 Hardin Library for the Health Sciences, 600 Newton Rd, The University of Iowa, Iowa City, IA  52242-1098, (319) 335-6564, or e-mail irb@uiowa.edu. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above. Thank you very much for your consideration. Signed consent is not needed for participation in this study; simply return the attached questionnaire in the accompanying self-addressed stamped envelope to indicate your agreement to participate.

Sincerely,

Dawnette Cigrand, ABD
Professional School Counselor
Doctoral Candidate, University of Iowa