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Social stories: do they improve the social pragmatic skills of second through fourth grade students with learning disabilities?

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SOCIAL STORIES: DO THEY IMPROVE THE SOCIAL PRAGMATIC
SKILLS OF SECOND THROUGH FOURTH GRADE STUDENTS
WITH LEARNING DISABILITIES?

by
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ABSTRACT

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SOCIAL STORIES: DO THEY IMPROVE THE SOCIAL PRAGMATIC
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WITH LEARNING DISABILITIES?
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The primary purpose of this study was to determine if social stories would improve the social pragmatic skills, specifically asking a question and staying on topic, of second through fourth grade students with learning disabilities. The subjects were six selected students enrolled within a self contained class for students with learning disabilities in southern New Jersey in February and March 2008. Data on social pragmatic skills were collected during the four phases (ABCA) of the study on a tally data sheet during their 35 minute grammar class. Data analysis suggests that both social stories improved the students' demonstration of pragmatic social skills during intervention phases. Compared to the first baseline, subjects demonstrated an increase or maintenance of social skills during the reversal baseline. The results suggest that social story interventions impact students with learning disabilities by improving their demonstration of social pragmatic skills. Implications for improving social pragmatic skills for students with learning disabilities by utilizing social stories are discussed.

ACKNOWLEDGMENTS

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CHAPTER ONE

INTRODUCTION

Students with learning disabilities exhibit deficits in social pragmatic skills, often creating difficulty in their ability to perform academically and socialize appropriately at school. Social pragmatic skills refer to the language skills used to express communication appropriately within a social and communicative context according to cultural norms. Pragmatic ability depends upon social and linguistic skill acquisition.

The social pragmatic skills of students with learning disabilities have often been studied in conjunction with self-concept and academic performance in the classroom. Researchers have found that students with learning disabilities tend to rate themselves as having lower self-concepts for academics and social status than their nondisabled peers (Bear, Minke & Manning, 2002; Elbaum & Vaughn, 2003; Scarpati, Malloy & Fleming, 1996; Swanson & Malone, 1992). Furthermore, the nondisabled peers often rate the students with learning disabilities as having an even lower social status than the students with learning disabilities themselves (Bear, Minke & Manning, 2002). Research regarding the pragmatic social skills of students with learning disabilities has found that they have significant difficulties in oral communication skills and comprehension skills, including the ability to stay on topic and ask questions (Lapadat, 1991; Wiig, Becker, & Semel, 1983; Spekman & Roth, 1984).

Children with learning disabilities often exhibit deficits in their ability to communicate with others in a socially acceptable manner (Court & Givon, 2003; Forness & Kavale, 1996; Kavale & Forness, 1996). Although there have been numerous attempts to teach social pragmatic skills to these individuals; there has not been substantial evidence that these methods help them improve their social or their communication skills (Forness & Kavale, 1996; Kavale & Forness, 1996; Kavale & Mostert, 2004). The programs that have been implemented have resulted in mixed or minimal improvement in their social pragmatic skills. In order to assist these individuals with learning and maintaining social pragmatic skills, it is vital that researchers utilize a multitude of social skills training methods and programs to determine which ones will result in the most improvement.

One method that has been found to be successful I enhancing social skills is Social Stories. Social stories have been used for individuals with Autistic Spectrum Disorders (ASD). There is some evidence that social story interventions may improve the social skills of students with other disabilities (Toplis and Hadwin, 2006). Based on the results of successful social story skills training, it has been noted that "Social stories are most likely to benefit students functioning intellectually in the trainable mentally impaired range or higher who possess basic language skills" (Gray & Garand, 1993, p. 2). Students with learning disabilities generally function within or above this intellectual range and although many have language skills deficits they do possess the basic language skills that would be required for the Social Stories intervention to be successful.

Thus far, researchers have not utilized Social Stories interventions with the learning disabled population to determine if this form of social skills training would improve their social pragmatic skills. Since students who are learning disabled exhibit some similar social pragmatic skill deficits as those with ASD, they also may benefit from this intervention.

Statement of the Problem

The purpose of this study was to analyze whether the use of social stories with second through fourth grade students with learning disabilities will improve their social pragmatic skills, specifically their ability to stay on topic and ask questions. This study was designed as a partial replication of a previous study conducted by Crozier and Tincani (2005) in order to determine if the use of social stories with second through fourth grade students with learning disabilities improve their social pragmatic skills.

Research Question

This study addressed the following research question:

1. Does the use of social stories with second through fourth grade students with learning disabilities improve their social pragmatic skills? For the purposes of this study, social pragmatic skills refer to the students' ability to communicate in a socially acceptable manner with others, specifically their ability to stay on topic and ask a question.

Since social stories have been successful in improving the social skills of students with other disabilities that have similar intellectual functioning and basic

language skills abilities, it is hypothesized that the use of social stories with second through fourth grade students with LD will improve their social pragmatic skills.

Assumptions and Limitations

The population sample in this study was limited to my ten, learning disabled students enrolled in the second through fourth grade learning disabled program at an elementary school in southern New Jersey. Findings for this study may not be representative of other learning disabled programs in elementary schools due to differences in social pragmatic skills. Differences in social pragmatic skills, convenience sampling, story construction and implementation, as well as researcher perspectives, may have presented potential bias in the findings.

Operational Definitions

1. Autism Spectrum Disorders (ASD): "A spectrum of psychological conditions characterized by widespread abnormalities of social interactions and communication, as well as severely restricted interests and highly repetitive behavior. The three main forms of ASD are autism, Asperger Syndrome, and PDD-NOS" (Wikipedia, 2008, p. 1).

2. Asking a Question: For this study, asking a question was defined as individuals raising their hand and asking a question that is relevant to the information being taught or discussed during instruction.

3. Learning Disabled: According to Chapter 14: Special Education New Jersey Administrative Code (2006), learning disabled "means a

disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia." (p. 57)

4. Social Stories: "A Social Story describes a situation, skill, or concept in terms of relevant social cues, perspectives, and common responses in a specifically defined style and story format" (The Gray Center, 2008, ¶ 2).

5. Staying on Topic: For this study, staying on topic was defined as individuals contributing to a classroom discussion by talking about content that is relevant to the information being taught or discussed during instruction.

6. Students: Learning disabled students enrolled in the second through fourth grade LD Program at an elementary school in southern New Jersey during the 2008-2009 academic year.

Significance of the Study

This study examined the importance of social skills training for students with learning disabilities, specifically if the use of social stories with second through fourth grade students with LD will improve their social pragmatic skills. Furthermore, the social pragmatic skills of staying on topic and asking a question where taught utilizing the Social Story skills training program. Existing programs

have had limited success in improving the social skills of students with learning disabilities; however, social stories have had success in improving the social skills of students with disabilities other than ASD. The findings of this study may provide insight for researchers, educators, behavior therapists, and parents who are interested in utilizing social stories to teach social skills to students with learning disabilities that have communication and social interaction deficits. Furthermore, this study contributed to the research base of social stories intervention and incorporated a new research population.

Summary

Students with learning disabilities often exhibit difficulties in social pragmatic skills. Researchers have attempted to assist these students with obtaining communication skills primarily by utilizing social skills training programs created specifically for research, which have resulted with minimal or mixed improvement of their skills. This study examined how the use of social stories with second through fourth grade students with learning disabilities improved their social pragmatic skills, specifically the social skills of staying on topic and asking questions. Social stories have primarily been utilized with students with ASD; however, this social skills training method has resulted in students with other disabilities improving their social skills. Since the only criteria set forth by Carol Gray, the creator of social stories, is that students must be within the mentally trainable cognitively impaired range and possess basic language skills; students with learning disabilities would fit her criteria and may also have similar improvements in social skills as those with ASD.

CHAPTER TWO

REVIEW OF THE LITERATURE

Brief Overview of Social Communication Deficits

Children with learning disabilities demonstrate deficits in their social pragmatic skills, often leading to difficulty in their ability to perform academically and socialize appropriately at school. Social pragmatic skills can be defined as appropriate language communication skills utilized within social situations. When compared with their nondisabled peers, children with learning disabilities (LD) are significantly more deficient in their ability to socialize and communicate with others in a culturally acceptable manner (Court & Givon, 2003; Kavale & Forness, 1996).

The social pragmatic skills of students with LD have often been studied in conjunction with self-concept and academic performance in the classroom. Researchers have found that students with learning disabilities tend to rate themselves as having lower self-concepts for academics and social status than their nondisabled peers (Bear, Minke & Manning, 2002; Elbaum & Vaughn, 2003; Scarpati, Malloy & Fleming, 1996; Swanson & Malone, 1992). Their nondisabled peers have rated them as having an even lower social status then they had rated themselves (Bear, Minke & Manning, 2002; Swanson & Malone, 1992). In addition, students with LD rated themselves as having experienced a lack of self-worth (Kavale & Nye, 1985). Overall, students with learning disabilities

consistently have lower peer acceptance ratings than their nondisabled peers, indicating that the deficits in their pragmatic social skills interfere with their academic performance and social development (Vaughn, Hogan, Kouzekanani, & Shapiro, 1990).

Research on the pragmatic language skills of students with learning disabilities has found that they have significant difficulties in oral communication skills and comprehension skills, including the ability to stay on topic and ask questions (Lapadat, 1991; Wiig, Becker, & Semel, 1983; Spekman & Roth, 1984). According to a meta-analysis conducted by Kavale & Nye (1985), one of the significant factors that differentiated students with LD from their nondisabled peers was their pragmatic language abilities when applied within a social/behavior domain. When language assessments were compared, the researchers found that the greatest differentiation between LD and nondisabled students was in the linguistic domain (1985). In a meta-analysis of 152 studies, Kavale & Forness (1996) found that teachers' perceived lack of academic competence and social interaction as the two areas that prominently differentiated students with LD from their nondisabled peers.

According to a meta-analytic review conducted by Lapadat (1991), students with language and/or learning disabilities exhibited significant pragmatic deficits in conversation compared to their nondisabled peers across settings, conversational partners, age groups, and types of specific pragmatic skills measured. The pragmatic deficits were found to be consistent and pervasive for students with language and/or learning disabilities, which supports the perspective

that students with LD may also be referred to as having a language disorder (1991). Furthermore, the students with language and/or learning disabilities were found to have the most pronounced difficulties in lexical selection (ability to be specific and accurate in word choice and usage), use across speech acts (ability to follow conversations, maintain sequence of thoughts, and make connections in conversations), and speech acts (ability to assume both speaker and listener role as well as initiate directives, questions, and comments) (Lapadat, 1991). The weak social pragmatic skills of these students interfere with their ability to engage in academic and social tasks, including staying on topic during a conversation or class discussion and asking relevant questions during conversation.

Social Skills Interventions

Researchers have investigated social skills training programs to determine how they improve the social skills of students with learning disabilities. Many social skills interventions encourage teachers to actively model social skills, engage students in cooperative learning, and provide direct instruction of social skills through various social skills programs. The modeling and direct instruction of social skills often occurs within a whole group discussion, where students are able to discuss and learn social skills and strategies within a positive, structured environment. When appropriate and effective social skills training programs are implemented, students are able to self-regulate their behaviors, increase their academic and social performance, and experience increased self-concept (Morris, 2002).

Within social skills research there have been many variations in the presentation of the social skills themselves, including direct instruction and cooperative group approaches. Prater, Bruhl, & Serna (1998) conducted a study to compare three procedures for teaching social skills to 13 middle school age students with disabilities to determine which procedure had the greatest impact on the students' acquisition of social skills. All three of the groups received learned the following social skills: listening, problem solving, and negotiating. The first group received teacher-directed instruction, the second group received a structured natural approach, and the third group generated, defined, and discussed cooperative group rules in conjunction with the three social skills. Teacher directed instruction involved teachers instructing the participants on three social skills modeled after those used in A Social Skills Program for Adolescents (ASSET) by incorporating modeling, guided practice, and role playing. The group that received a structured natural approach was also taught the same three skills; however, the skills were taught through social skills centers that featured a skill of the week which was discussed, modeled, and reflected upon through rotating roles within cooperative groups. The student generated cooperative group created a list of skills to work on during the study, defined the behaviors of the social skills, and were directed to complete cooperative learning activities while employing the social skills they generated. The three groups were examined during role playing activities, and the researchers found that the first group improved their skill performance for all three social skills, the second group had minimal gains, and the third group had no improvement. At the conclusion of

their study, the researchers asserted the importance of providing direct instruction

to students with LD in cooperative groups in order to improve their social skills

(1998). In another study conducted by Prater, Serna, & Nakamura (1999), the

effectiveness of teacher versus peer social skill instruction on the acquisition and

short term maintenance of social skills by 12 middle school aged children with

learning disabilities was examined. A special education teacher taught 12

students with learning disabilities the social skills of giving positive feedback,

contributing to a discussion, and accepting negative feedback. Out of the 12

students, five were randomly chosen to teach the three social skills to other

students with learning disabilities. The researchers found that both groups

improved in all three social skills, but the least amount of improvement was for

the social skill of accepting negative feedback. Furthermore, students that were

trained by their LD peers acquired the skills faster, but they were unable to

maintain the skill at levels as high as those that were trained by the teacher. The

researchers assert that "social skill instruction taught by peers may be as effective

and more efficient that when taught solely by teachers" (1999, p. 19). Although

several approaches were used to teach social skills to students with learning

disabilities, both of the studies had some of the same researchers that were able to

claim that teacher-directed instruction in cooperative groups had a greater impact

and in the other study were able to claim that peer training in cooperative groups

had a significant impact on social skills acquisition. These studies are another

example of how Kavale & Mostert (2004) claim that social skills intervention

may be successful, but that the extent of its impact is unknown due to the various implementation of training.

In a study conducted by Agran, Blanchard, Wheymeyer, & Hughes (2001), the effects of student-directed learning strategies on the classroom behavior of six students with disabilities were examined using a multiple baseline across groups. The researchers examined target behaviors that pertained to academic, study, and social skills. The students were taught by their teachers how to select, monitor, evaluate, and reinforce their own target behaviors. The researchers suggest that the student-directed learning strategies in conjunction with a teacher-delivered reinforcer facilitated their skill acquisition and maintenance of target skill behaviors. However, it was noted that the participants experienced difficulty in regulating their own behavior. Once a money reinforcer was introduced, the students immediately achieved and maintained their target skills at 100% accuracy, indicating that verbal praise from their teachers was not a sufficient incentive. Although it appears that the students increased their target skill behaviors, other factors played a more vital role, such as teacher-directed consequences, rather than their own ability to apply the student-directed learning strategies.

Kavale & Mostert (2004) conducted a meta-analysis of 53 studies examining the efficacy of social skills training with students with learning disabilities. The researchers found an effect size of .211, indicating that only about 58% of students with LD would significantly benefit from social skills training. There were no significant findings regarding the age of participants,

duration of social skills training, and the quality of the research. The results of social skills training is primarily based on rating assessments that are completed by the subjects with learning disabilities, their peers, and their teachers. Although there were no significant effect sizes regarding perceived effectiveness, the students with disabilities perceived the most benefits from the social skills training in the areas of self-concept, social problem solving, and social competence (2004). Even though students with LD believed that the social skills training enhanced these social areas, the findings revealed that the students did not interact or socialize with their peers or teachers much differently than prior to the intervention. The researchers noted that almost all of the studies they analyzed had used a specific social skills training program that was developed for the specific study that was being conducted, often including an combination of techniques found within the social skills literature with little rationale or pilot testing prior to the studies (Kavale & Mostert, 2004). Kavale & Mostert (2004) purport that programs used thus far in a majority of the research base may not accurately reflect the potential that social skills training may have for students with disabilities because of the way that researchers have utilized the programs in their studies.

The impact of group social skills training on students with learning disabilities within an Israeli middle school was researched by Court & Givon. Court & Givon (2003) created their group social skills training based on the effective elements of social situations, active participation in discussions, and group support. The two groups of students (one with six boys and one with six

girls) met with the researchers once a week for an hour over the course of five months to receive the group social skills training. Each training session presented a new social skill, such as making friends or listening, with visual, verbal, and written media that allowed the students to examine various methods for solving problems in social situations (2003). Based on observations and student interviews and self-assessments, the researchers found that almost all the participants increased their ability to identify and express their own feelings in social situations; however, not all the participants were able to identify others' feelings. The most significant impact the social skills program had was on the participants with verbal learning disabilities, especially in the area of problem solving. Although all of the participants indicated that they had difficulty in initiating social contacts with others, there was no improvement found in this area as a result of the social skills training. One unexpected finding of this study was that the participants' feelings of loneliness actually increased after the intervention. The results of this study also correlate with research regarding the mixed results of social skills intervention programs (Forness & Kavale, 1996; Kavale & Forness, 1996; Kavale & Mostert, 2004).

Overall, researchers have noted that students with learning disabilities are at risk for problems within the social domain, including self-concept, social cognitive and linguistic skills, and interpersonal skills (Bryan, 2005). During the course of social skills research over 200 interventions have been developed; however, these interventions have been found to have limited effectiveness in changing peer acceptance of students with learning disabilities primarily due to

target behaviors not matching the behaviors seen as a source of peer rejection (Bryan, 2005). The studies that focus on locus of control and self-concept tend to have the most consistently positive effects on academic achievement (Bryan, 2005). For various reasons, the current social skills training programs employed have not been significantly effective in impacting students with learning disabilities and enabling them to be successful in social situations. Researchers should continue to seek alternate methods of social skills training in order to find what methods significantly impact social skills acquisition.

<center>Brief Overview of Social Stories</center>

Another form of social skills training for students with learning disabilities is referred to as visual script interventions, or written or pictorial examples of appropriate phrases that can be utilized to cue themselves to conversing in a socially acceptable manner with others. Visual script interventions have been successful with students that have minimal language skills, such as those with Autistic Spectrum Disorders, as well as with students with broad verbal skills but who have poor social skills (Ganz, 2007). This intervention has seven specific steps that need to be followed, including identifying a target behavior, creating a script, and eventually fading the script. Comic Strip Conversations is a similar form of social skills training that has also been successful with students with ASD. Comic Strip Conversations are illustrated books created for students with specific behavior targets that are demonstrated in social situations with appropriate positive solutions. In a study conducted with four students with mild/moderate learning, cognitive, and behavioral disabilities, the researchers

found that after six weeks of utilizing Comic Strip Conversations all of the students exhibited significant improvements in social skill perceptions, especially in creating solutions to problems (Pierson & Glaeser, 2005). The researchers admit that Comic Strip Conversations should be utilized as a first step in improving problematic behaviors, but that other avenues should be explored. Although these programs have had some promising results, it is important to note that the majority of the research has been conducted with small case studies of students with ASD. In addition, it has not been made clear to what extent these social skills training programs could help students with LD in regards to their social pragmatic skills. It is not practical to consistently create a new visual script or comic strip for every social situation a student with LD may encounter. Students with learning disabilities would benefit more from specific social skills strategies that they could utilize for a multitude of social situations.

A variation of the visual script approach to social skills training that has been gaining a lot of attention lately is social stories. In an effort to assist students with acquiring social skills, Carol Gray developed social stories by employing concepts associated with social cognition, or the cognitive skills necessary for social interactions (Gray & Garand, 1993). Gray describes a social story as a circumstance, skill, or concept that is written in terms of applicable social cues, viewpoints, and common responses in a specifically distinctive style and story format (The Gray Center, 2008). Answers to questions about behavioral expectations for specific situations are incorporated in social stories in order to teach students with ASD how to ask questions and understand the importance of

gathering information (Gray & Garand, 1993). This format of teaching social skills allows for students with ASD to understand what is being taught with minimal confusion since Gray (2000) created guidelines for observing and collecting information, translating the social information into meaningful text and illustrations, and customizing the text to the interest and capabilities of the individuals.

Over time, the format for a social story has become more refined; Gray (2000) describes four basic sentence types: (a) *descriptive* (provide context variables of the circumstance); (b) *perspective*, (describe reactions and feelings in connection to the circumstance); (c) *affirmative*, (explain cultural views); and *directive* (describe specific behaviors in response to a social cue or circumstance) (Sansoti et al., 2004). These four basic sentences must be used in a specific frequency referred to as the basic social story ratio, where a social story should have a ratio ranging from two to five descriptive, perspective and/or affirmative sentences for every directive sentence (Gray, 2000). Gray recently introduced two additional types of sentences that are optional for constructing a social story: (a) *control sentences*, which increases understanding through interests or analogies, and (b) *cooperative sentences*, which provides information about who will provide help and how they will do this for the individual (2000). The construction of a social story can vary immensely for individuals; however, all social stories must include descriptive sentences and follow the basic social story ratio.

During the 1990s, educators primarily researched social stories by utilizing descriptive case studies, or narrative accounts that focus on observations of the changes in students' targeted behaviors and their reactions to the intervention, in order to assess their effectiveness within the context of classroom settings (Norris & Dattilo, 1999; Rogers & Myles, 2001; Rowe, 1999). One of the first studies conducted incorporated an AB design, where phase A involved gathering baseline data on the occurrence of an autistic child's specific behaviors and phase B was the intervention of social stories and the collection of behavioral data (Norris & Dattilo, 1999). The researchers found a 50% decrease of the autistic child's inappropriate social behavior from the first day to the last day of the study. Shortly after this study was conducted, two descriptive case studies emerged with similar claims regarding the effectiveness of Social Stories in promoting desired social behaviors for males with Asperger Syndrome (Rogers & Myles, 2001; Rowe, 1999). Rowe (1999) conducted a study to increase a student's behavior of eating lunch calmly by implementing a social story that was tailored to his needs. She claimed that her detailed observations of the student showed an increase in the desired behavior of eating his lunch without anxiety due to the social story intervention (Rowe, 1999). Similarly, Rogers and Myles (2001) introduced two social stories about transitioning from classes as well as Comic Strip Conversations in an attempt to assist the student in increasing appropriate social behaviors while he navigated to his classes. The researchers cautiously indicated that social stories and Comic Strip Conversations hold potential for children with AS; however, they explained that further research was

necessary to examine their effectiveness. Descriptive case study designs have

been considered to offer a weaker evidence base than single case experimental

designs due to observer bias, reliance on memory, and the nature of the data

collection (Ali & Frederickson, 2006, p. 368).

The remainder of the evidence base for single participant studies involves

the implementation of single case experiments, which contain repeated measures

in each phase (e.g., ABAB) and the experimental manipulation of social stories as

an intervention. The findings from studies with the ABAB design suggest that

social stories were effective in decreasing targeted behaviors from baseline to

intervention (Adams, Gouvousis, VanLue, & Waldron, 2004; Kuttler, Myles, &

Carlson, 1998; Lorimer, Simpson, Myles, & Ganz, 2002). Adams et al. (2004)

found that a child with Asperger Syndrome decreased frustration behaviors

exhibited during homework time within the intervention phases. Studies that

incorporated variations of the design by implementing other techniques in

conjunction with the social story intervention have also found a decrease in

targeted behaviors (Crozier & Ticani, 2005; Reynhout & Carter, 2007). Crozier

and Ticani implemented an ABAC reversal design to reduce the behavior of

talking out for an 8 year old boy with autism. In both of the phase A conditions,

the student was observed without any interventions to collect baseline data. In the

intervention Phase B, a modified social story was read to the student immediately

prior to the observation period, and during intervention Phase C, the social story

intervention resumed with verbal prompts. The researchers found that the student

had a reduction in his talking out behavior during the intervention of the social

story in Phase B; he had an even greater reduction in his target behavior when the social story was reintroduced with verbal prompts (Crozier & Ticani). Furthermore, when maintenance probes were conducted two weeks after the intervention the researchers found that the talking behavior continued to be exhibited at low levels (Crozier & Ticani).

Despite the findings of these studies, there are several areas of concern regarding the empirical foundation for these results. First, due to the presentation of the social story intervention in the initial B phase, the possibility of skill acquisition during the third phase could account for the students exhibiting the targeted skill even after the story has been removed (Ali & Frederickson, 1996; Sansoti et al., 2004). Secondly, these studies incorporated several variables that could interfere with the efficacy of the social stories intervention, including: the use of additional interventions (physical or verbal prompting); multiple stories; the number of target behaviors; students' exposure to the stories; and the students' comprehension of the stories (Ali & Frederickson; Reynhout & Carter, 2006; Sansoti et al., 2004).

Over the past 15 years, researchers have increasingly conducted multiple participant experimental case studies in lieu of single participant studies due to limitations in the design that hinder interpretation of the results (Crozier & Tincani, 2007; Kuoch & Mirenda, 2003; Swaggart et al., 1995; Toplis & Hadwin, 2006). The efficacy of social story intervention has been preserved by some researchers through a multiple baseline design, which allows for controls across participants, settings, and behaviors (Barry & Burlew, 2004; Delano & Snell,

2006; Hagiwara & Myles, 1999; Thiemann & Goldstein, 2001; Scattone, Tingstrom, & Wilczynski, 2006; Scattone, Wilczynski, Edwards, & Rabian, 2002). This evidence base of multiple participant studies has resulted in the claim that social stories are successful in increasing desirable targeted social skills (Barry & Burlew, 2004; Crozier & Tincani, 2007; Delano & Snell, 2006; Hagiwara & Myles, 1999; Kuoch & Mirenda, 2003; Scattone et al., 2006; Swaggart et al., 1995; Thiemann & Goldstein, 2001). Swaggart and colleagues (1995) were the first to empirically validate social story intervention by teaching a young girl with autism socially acceptable forms of greeting behaviors and two boys-one with autism and one with a pervasive developmental disorder-how to share items (Scattone et al., 2006). Some studies have gathered evidence indicating that the effects of social story intervention can be maintained over time by students (Crozier & Tincani, 2007; Kuoch & Mirenda, 2003; Thiemann & Goldstein, 2001). Conversely, Scattone et al. (2002) investigated the effectiveness of social stories on reducing disruptive behaviors (tipping, staring, and shouting) of three students diagnosed with autism. A reduction in the disruptive behaviors from baseline to intervention was noted; however, the results were variable for each participant.

Although these studies have minimized possible confounds, there are several factors that still pose a threat to the internal validity of these experiments, including: story construction and implementation; variations in participants' exposure to the intervention; participant characteristics (e.g., severity & type of disability); interobserver reliability; and assumptions about how changes

generalize across settings, participants, and behaviors (Ali & Frederickson, 2006; Reynhout & Carter, 2006; Sansosti et al., 2004).

Social Story Interventions for Students with LD

Although there have been numerous attempts to teach social pragmatic skills to individuals with learning disabilities; there has not been substantial evidence that the methods utilized help them improve their social or their communication skills (Forness & Kavale, 1996; Kavale & Forness, 1996; Kavale & Mostert, 2004). The programs that have been implemented thus far have resulted in mixed or minimal improvement in their social pragmatic skills. Given the success of the use of social stories with students with ASD, researchers should consider utilizing social stories with students with LD. There is evidence that this intervention may improve the social skills of students with other disabilities (Kalyva & Agaliotis, 2008; Toplis & Hadwin, 2006).

Toplis and Hadwin (2006) examined the efficacy of social stories with students who had disabilities other than ASD. The researchers conducted a study that included five students classified as having special needs due to behavioral difficulties exhibited at school, but were not diagnosed with Autistic Spectrum Disorders. A social story was written for each of the five children (three boys, two girls, mean age = 7 years and 5 months) regarding their specific problems with following the lunch routine. The researchers implemented an ABAB design, where the intervention (phase B) involved the teachers reading the social stories to the students every day for ten minutes before lunch and the students being able to access the stories at any time. During the first and third

phases of the intervention (phase A), the children did not have access to the social stories. The target behavior for all five of the children was to independently enter the lunch room and sit down within two minutes of being dismissed from their classroom. After eighteen days had passed, the researchers concluded their study and noted an increase in the targeted behaviors was exhibited by three of the five students.

Recently, Kalyva & Agaliotis (2008) conducted a study that utilized social story intervention with a large group of children with LD for preventative purposes. The researchers examined the efficacy Social Stories in assisting students with LD to make more appropriate interpersonal conflict resolution strategies. There were 31 children with LD in the experimental group of the study, who were exposed to a social story, which was recorded and played, twice a week for a month. The control group consisted of 32 children with LD that did not receive any intervention. Prior to the study, the researchers found that the students with LD primarily utilized avoidance and hostile strategies in dealing with their interpersonal conflicts; however, after examining the individual interviews and teacher rating scales at the conclusion of the study, the researchers found that the children in the experimental group chose more positive strategies, such as compromising and accommodating, more than those in the control group. Furthermore, in a follow-up after the intervention the teachers rated the experimental group as having exhibited significantly less inappropriate social behaviors than their peers in the control group. The researchers concluded that

social stories constitute a prominent intervention for the improvement of the social competence of children with LD.

Since prior research on social skills training for students with learning disabilities has been inconclusive, it may be beneficial for researchers to continue to conduct studies utilizing social stories in order to assist them in gaining social skills. In addition, students who are learning disabled exhibit some similar social pragmatic skill deficits as those with Autistic Spectrum Disorders. Social story data on students with ASD has indicated that the method has been successful in improving their social skills; therefore, students with learning disabilities may also benefit from this intervention.

Summary of the Literature Review

Students with learning disabilities exhibit difficulties in social pragmatic skills, leading to problems with academic and social competency. Children with LD are often viewed by their peers as being less accepted socially, and these children tend to have a poor self-concept. Students with LD need assistance in acquiring social skills in order to improve their peer relationships and improve their academic performance.

Despite numerous studies being conducted on social skill acquisition and students with LD, there have been inconclusive results regarding the success of programs implemented. The social skills programs that have been utilized are often created solely for the purpose of examining if they increase the social skills in students with LD. Existing programs have had limited success in improving the social skills of students with learning disabilities; however, social stories have

had success in improving the social skills of students with disabilities other than Autistic Spectrum Disorders.

There remains a gap in the knowledge base concerning the impact that social stories have on populations other than those with ASD that also have similar deficits in their social pragmatic skills. This study was designed as a partial replication of a previous study conducted by Crozier and Tincani (2006) in order to determine if the use of social stories with second through fourth grade students with learning disabilities improve their social pragmatic skills, specifically their ability to stay on topic and ask questions.

CHAPTER THREE

METHODOLOGY

Context of the Study

The study was conducted at an elementary school in southern New Jersey. The NJ Department of Education (2000) lists the District Factor Group (DFG) for the township as "CD," based on the 2000 Decennial Census data. The DFG is an estimate of a school district's socioeconomic status (SES) that is ranked from "A" to "J;" districts having the latter classification have the highest SES. The "CD" ranking indicates that the district is in a lower SES community.

The elementary school is one of five in the district. It contains two self contained classrooms for students with learning disabilities-one for grades two through four and one for grades five and six. These students are classified as learning disabled according to the definition presented in Chapter 14 of the Special Education New Jersey Administrative Code (2006). They receive instruction from me in all content areas with the exception of specials and physical education. The only period during the day that these students are able to interact with nondisabled peers is during their 45 minute lunch period and some of their 30 minute specials where they are combined with another class.

Population and Sample Selection

The target population for this study was all students with learning disabilities enrolled in grades two through four in New Jersey during the 2008-2009 academic year. The available population was six out of nine students with learning disabilities that were enrolled in the self contained classroom for grades

two through four. The convenience sample was the nine students with learning disabilities that I instruct within the self contained program for grades two through four at an elementary school within southern New Jersey.

Instrumentation

The instruments used to observe the students' behavior were two social stories based on the basic social story ratio as explained in *The New Social Story Book: Illustrated Edition* (Gray, 2000). This book was consulted in order to determine accuracy in the story composition according to the basic social story ratio and content validity according to the guidelines set forth by Carol Gray, the creator of social stories. The basic social story ratio refers to the specific frequency of sentence variation, where a social story should have a ratio ranging from two to five descriptive, perspective and/or affirmative sentences for every directive sentence (Gray, 2000). Refer to chapter two for a more detailed explanation of the basic social story ratio. The social story utilized in Phase B, "Asking a Question in Class (Appendix D)," consisted of two descriptive and directive sentences and one perspective and affirmative sentence. For this study, asking a question was defined as individuals raising their hand and asking a question that is relevant to the information being taught or discussed during instruction. This social story incorporated the social pragmatic skills of hand raising, waiting for the teacher's acknowledgement, asking a question, and listening to the teacher's response. The social story utilized in Phase C, "Staying on Topic in Class (Appendix E)," consisted of two descriptive, perspective, and directive sentences and one affirmative sentence. For this study, staying on topic

was defined as individuals contributing to a classroom discussion by talking about content that is relevant to the information being taught or discussed during instruction. The second social story included all of the social pragmatic skills listed above for the first story with the addition of listening to the class discussion and staying on topic when speaking. Both social stories were printed on 8 ½ x 11 white paper and then laminated. They contained sentences in black print with size 16 Comic Sans font.

Data Collection

Following approval from the Institutional Review Board of Rowan University, permission was granted from the principal of the school to observe my class of students with learning disabilities (Appendix A). Consent forms were sent home with the students (Appendix B) to ask for permission for their participation in the study. The parents or guardians were asked to write their child's name on the consent form; however, there wasn't identifying information used in the study. The students had pseudonyms (e.g. Subject A) on the data sheet (Appendix C). Only my classroom assistant and I were aware of the students' pseudonyms on the data sheet.

This study incorporated a partial replication of the study conducted by Crozier and Tincani (2005), but with an ABCA design. The target behaviors for the students were asking a question in class and staying on topic in class. Specific social pragmatic skills were observed and recorded daily during their 35 minute grammar instruction by the classroom assistant. The social stories were read aloud and comprehension questions were reviewed by me with the students

immediately prior to the observation during the intervention phases (Phase B & C).

During Phase A, baseline data was collected on the frequencies of the students' pragmatic social skills on the data sheet (Appendix C) for five consecutive school days. The pragmatic social skills that were tallied during the initial baseline included: hand raising; waiting for the teacher's acknowledgement; asking a question; listening to the teacher's response; listening to the class discussion; and staying on topic while speaking. During Phase B, the social story entitled "Asking a Question in Class" was read and comprehension questions were asked for ten consecutive school days. The students' frequencies of hand raising, asking a question, waiting for the teacher's acknowledgement, and listening to the teacher's response were recorded on a data sheet by the classroom assistant. During Phase C, the social story entitled "Staying on Topic in Class" was read and comprehension questions were asked for ten consecutive school days. All of the social pragmatic skills that were examined in Phase B were also tallied in Phase C with the addition of listening to the class discussion and staying on topic while speaking. Finally, the reversal baseline data (second Phase A) included the observation of the same pragmatic social skills as in the initial baseline for five consecutive days.

Data Analysis

The independent variables in this study were the implementation of the social stories. The dependent variables in this study were the frequencies of the students' staying on topic during a conversation and asking relevant questions

during a conversation in class. Variations in the frequencies of the students'

staying on topic and asking relevant questions were explored during the

intervention phases and between baselines using Statistical Package for the Social

Sciences (SPSS) computer software. Data were analyzed using frequency tables

and graphs. The impact of the independent variables on the dependent variables

was studied using cross-tabular analysis obtained through SPSS. Descriptive

statistics (frequency distributions & percentages) were used to examine data in

regards to the research question.

CHAPTER FOUR

FINDINGS

Profile of the Sample

The subjects for this study were selected from my self contained

classroom of learning disabled students in grades two through four at a school in

southern New Jersey during February and March 2008. Of the 9 students enrolled

in my class, 6 students were granted parental permission to participate in the

study, yielding a participation rate of 67%. There were 2 females (33%) and 4

males (67%). The subjects were between the ages of 7 and 10.

Analysis of the Data

This study examined if the use of social stories with second through fourth

grade students with learning disabilities would improve their social pragmatic

skills. For the purposes of this study, social pragmatic skills refer to the students'

ability to communicate in a socially acceptable manner with others, specifically

their ability to stay on topic and ask a question.

During Phase B, the students read the social story entitled "Asking a

Question in Class." Table 4.1 indicates the frequencies of the social pragmatic

skills hand raising, waiting for the teacher, asking a question, and listening to a

response. The total frequencies of these behaviors were 20 (35.1%), 16 (28.1%),

10 (17.5%), 11 (19.3%) during the initial baseline and 55 (30.6%), 45 (25%), 54

(30%), and 26 (14.4%) during the social story intervention, respectively (see

Figure 4.1). Social story intervention data indicates that five subjects (83%) had exhibited an increase in hand raising and waiting for the teacher, and six subjects (100%) had exhibited an increase in asking questions and waiting for responses (see Table 4.1). Data indicates that Subject F was the only student who did not increase the social pragmatic skills of hand raising and waiting for the teacher. It should be noted that Subject B and E were each absent on a day of data collection during Phase B. Data revealed that subjects increased their demonstration of the social pragmatic skills with the social story intervention in Phase B (see Figure 4.1).

Table 4.1

Asking a Question Social Story Intervention Data (n=6)

Subjects	Hand		Waited		Question		Response	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
A	12	22	9	20	6	22	5	22
B	0	2	0	1	1	2	2	2
C	3	4	2	3	1	4	1	4
D	0	11	0	8	0	11	1	11
E	3	15	3	12	2	14	2	14
F	2	1	2	1	0	1	0	1
Total	20	55	16	45	10	54	11	26
%	35.1	30.6	28.1	25.0	17.5	30.0	19.3	14.4

Note. Subjects B and E were absent on a day of data collection, resulting in zero social pragmatic skills for the day.
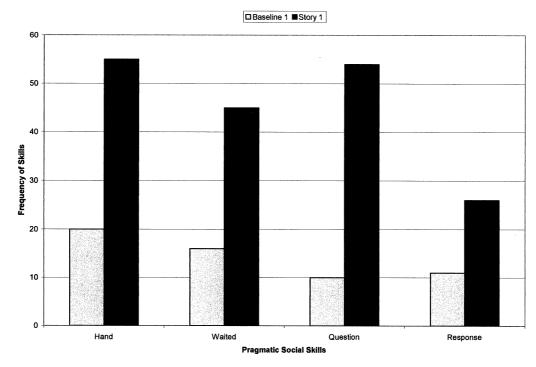
Figure 4.1 Total Frequencies of Pragmatic Skills for Subjects Across Phase B.

Table 4.2

Staying on Topic Social Story Intervention Data (n=6)

Subjects	Hand		Waited		Question		Response		Discussion		Topic	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
A	12	31	9	27	6	9	5	28	1	34	6	34
B	0	9	0	9	1	2	2	8	1	11	0	11
C	3	12	2	12	1	6	1	8	0	15	1	15
D	0	0	0	0	0	0	1	0	1	2	0	2
E	3	15	3	12	2	11	2	12	0	18	1	18
F	2	14	2	13	0	4	0	8	2	13	0	13
Total	20	81	16	73	10	32	11	64	5	93	8	93
%	28.6	18.6	22.9	16.8	14.3	7.3	15.7	14.7	7.1	21.3	11.4	21.3

During Phase C, the students read the social story entitled "Staying on Topic in Class." Table 4.2 indicates the frequencies of the social pragmatic skills hand raising, waiting for the teacher, asking a question, and listening to a response, listening to a discussion, and staying on topic. The total frequencies of these behaviors were 20 (35.1%), 16 (28.1%), 10 (17.5%), 11 (19.3%), 5 (7.1%),

and 8 (11.4%) during the initial baseline and 81 (18.6%), 73 (16.8%), 32 (7.3%),

64 (14.7%), 93 (21.3%), and 93 (21.3%), respectively (see Figure 4.2). Social

story intervention data indicates that five subjects (83%) had exhibited an increase

in hand raising, waiting for the teacher, asking a question, and listening to a

response, and six subjects (100%) had exhibited an increase in listening to a

discussion and staying on topic (see Table 4.2). Data indicates that Subject D was

the only student who did not increase the social pragmatic skills of hand raising,

waiting for the teacher, and asking a question. In addition, Subject D decreased in

listening to a response from 1 during initial baseline to 0 during the intervention.

Data revealed that subjects increased their demonstration of the social pragmatic

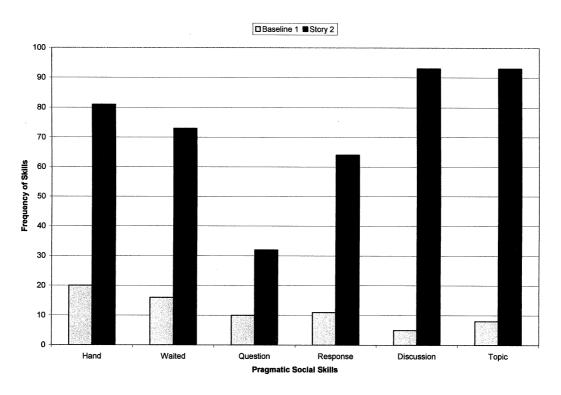skills with the social story intervention in Phase C (see Figure 4.2).

Figure 4.2 Total Frequencies of Pragmatic Skills for Subjects Across Phase C.

Table 4.3

Comparison of Baseline Data (n=6)

Subjects	Hand		Waited		Question		Response		Discussion		Topic	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
A	12	1	9	1	6	2	5	3	1	4	6	4
B	0	7	0	7	1	1	2	1	1	6	0	6
C	3	1	2	1	1	1	1	1	0	3	1	3
D	0	1	0	1	0	1	1	1	1	2	0	2
E	3	4	3	4	2	4	2	4	0	6	1	6
F	2	3	2	3	0	1	0	2	2	3	0	3
Total	20	17	16	17	10	10	11	12	5	24	8	24
%	28.6	16.3	22.9	16.3	14.3	9.6	15.7	11.6	7.1	23.1	11.4	23.1

Note. Subject A was absent on a day of data collection, resulting in zero social pragmatic skills for the day.

Similarly, data between baseline phases indicates an increase or maintenance in the frequencies of the social pragmatic skills hand raising, waiting for the teacher, asking a question, listening to a response, listening to a discussion, and staying on topic. The total frequencies of these behaviors were 20 (35.1%), 16 (28.1%), 10 (17.5%), 11 (19.3%), 5 (7.1%), and 8 (11.4%) during the initial baseline and 17 (16.3%), 17 (16.3%), 10 (9.6%), 12 (11.6%), 24 (23.1%), and 24 (23.1%) during the reversal baseline, respectively (see Figure 4.3). Figure 4.3 indicates that the frequency of hand raising decreased during the reversal baseline phase from 20 (28.6%) to 17 (16.3%), and the frequency of asking a question remained 10 for both phases. Reversal baseline data revealed that: six subjects (100%) exhibited an increase in listening to a discussion; five subjects (83%) exhibited an increase in staying on topic; four subjects (67%) had exhibited an increase in hand raising and waiting for the teacher; three subjects (50%) had exhibited an increase in asking questions; two subjects (33%) subjects exhibited an increase in listening to a response (see Table 4.3). Reversal baseline data also indicated that two subjects (33%) continued to maintain the same frequency of

asking a question and listening to a response when compared to the initial

baseline (see Table 4.3). Data suggests that a majority of the subjects increased or

maintained their frequency of the six social pragmatic skills between baselines as

follows: Subject E and Subject F increased all six skills (100%); Subject D

increased five skills (83%) and maintained one skill (17%); Subject B increased

four skills (67%) and maintained one skill (17%); Subject C increased two skills

(33%) and maintained two skills (33%); and Subject A increased two skills (33%)

(see Table 4.3). It should be noted that Subject A was absent on a day of data

collection during the reversal baseline. Data revealed that subjects tended to

either maintain or increase their demonstration of the social pragmatic skills
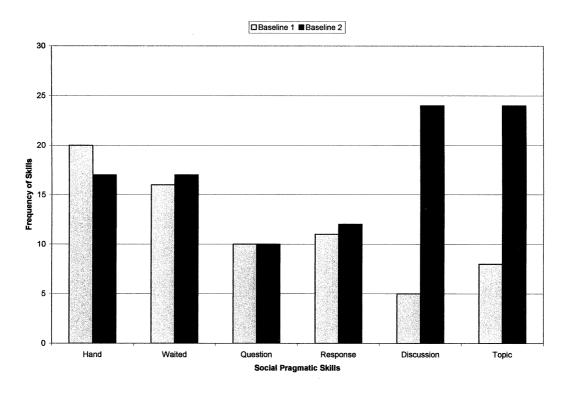
between baseline phases (see Figure 4.3)

Figure 4.3 Total Frequencies of Pragmatic Skills for Subjects Across Baselines.

This study examined how the use of social stories with second through fourth grade students with learning disabilities improved their social pragmatic skills, specifically the social skills of staying on topic and asking questions. During intervention phases (Phase B & C), the subjects exhibited an increase in pragmatic social skills that was larger than either baseline phase, suggesting that the presence of the social stories impacted the behavior of the students during those phases. The data suggests that students improved or maintained the social pragmatic skills of asking a question and staying on topic when exposed to a social story intervention. This finding is in agreement with other studies that have utilized social stories to improve social skills for students with disabilities other than Autistic Spectrum Disorders (ASD) (Kalyva & Agaliotis, 2008; Toplis & Hadwin, 2006). Furthermore, it is in accordance with Gray's criteria for utilizing social skills with specific populations, which states that students must be within the mentally trainable cognitively impaired range and possess basic language skills to have success with the intervention. Although data revealed an increase in pragmatic social skill frequencies, it is important to note that individual subjects responded differently to the social story interventions. Confounds within the study that could have attributed to the differences in the subjects' demonstration of social pragmatic skills may include: absences during the study; grammar assessments during the study; story construction; story presentation; and individual responses towards attempts to change behaviors.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

This study investigated if the use of social stories would improve the
social pragmatic skills of selected second through fourth grade students with
learning disabilities at an elementary school in southern New Jersey, in February
and March 2008. This study was designed to assess the impact of two social story
interventions, including asking questions and staying on topic in class, by
observing the following social pragmatic skills: hand raising; waiting for the
teacher; asking a question; listening to a response; listening to a discussion; and
staying on topic. This study incorporated a partial replication of the study
conducted by Crozier and Tincani (2005), but with an ABCA design. The
subjects in this study were between the ages of 7 and 10.

This study comprised of four phases, including an initial and reversal
baseline (Phase A), and two social story intervention phases (Phase B & C). Data
on the social pragmatic skills exhibited by the subjects were tallied on a data sheet
by the classroom assistant throughout all phases of the study during their 35
minute grammar instruction.

Descriptive statistics (frequency distributions & percentages) were used to
analyze the data from the tallied data sheets. Variations in the frequencies of the
students' asking relevant questions and staying on topic were explored during the

intervention phases and between baselines using Statistical Package for the Social Sciences (SPSS) computer software. Data suggests that the social stories had an impact on the subjects since they increased their social skills during the intervention phases and maintained or increased their social skills between baselines.

Discussion of the Findings

The majority of the subjects had an overall increase or maintenance of social pragmatic skills during the intervention phases (Phase B & C) and in a comparison between baselines (Phase A). This finding supports previous studies conducted separately by Barry & Burlew, 2004; Crozier & Tincani, 2007; Delano & Snell, 2006; Hagiwara & Myles, 1999; Kuoch & Mirenda, 2003; Rowe, 1999; Rogers & Myles, 2001; Scattone et al., 2006; Swaggart et al., 1995; and Thiemann & Goldstein, 2001. In an effort to assist students with acquiring social skills, specifically individuals with Autistic Spectrum Disorders (ASD), Carol Gray developed social stories to provide answers to questions about behavioral expectations for specific social situations and to teach students with ASD how to ask questions and understand the importance of gathering information (Gray & Garand, 1993). Furthermore, Gray created guidelines for observing and collecting information, translating the social information into meaningful text and illustrations, and customizing the text to the interest and capabilities of the individuals, allowing for students with ASD to understand what is being taught with minimal confusion. Kuttler et al. (1998) indicated that social stories may be effective for students since it assists them in reacting to a specific situation by

incorporating directives, choices, and rationales. It seems that social stories provide subjects with the information that they lack regarding appropriate social cues and choices, encouraging them to utilize behaviors specific to a social situation. Although this study did not incorporate the same experimental design, story construction, and implementation as the studies listed previously, the social stories had a positive impact on the subjects.

Data analysis revealed an increase in the subjects' social pragmatic skills from the initial baseline to the first social story intervention (Phase B) and the second social story intervention (Phase C). During Phase B, all of the subjects increased their social skills of hand raising, waiting for the teacher, asking a question, and listening to a response from the initial baseline (Phase A) with the exception of hand raising and waiting for the teacher for Subject F. Similarly, during Phase C, all of the subjects increased the social skills examined in Phase B as well as listening to a discussion and staying on topic with the exception of hand raising, waiting for the teacher, asking a question, and listening to a response for Subject D. Furthermore, the total frequencies of the students' social pragmatic skills also indicate that utilizing the asking questions in class social story (Phase B) and staying on topic in class social story (Phase C) with second through fourth grade students with learning disabilities improved their social pragmatic skills.

Although a majority of the subjects increased their social pragmatic skills, some individual subjects were impacted differently by the social story interventions. The social story interventions appeared to impact some students more than others during the intervention phases (Phase B & C) compared to the

initial baseline. During Phase B, Subjects A, D, & E had more notable gains that included more than double the frequency of social skills during the intervention phase than the initial baseline, while Subjects B, C, & F had minimal gains. During Phase C, all of the subjects exhibited more than double the frequency of social skills during the intervention phase than the initial baseline with the exception of Subject D, who had relatively no change. Interestingly, Subjects B, C, & F began to increase their exhibition of the social pragmatic skills by the second social story intervention, while Subject D went from having notable increases in the first social story intervention to having almost no increase in skills during the second intervention. Differences in individual responses to the social story interventions could be accounted for by: absences during the study; grammar assessments conducted during the study; individual ailments; prior behavior difficulties; and individual differences of learning disabilities. Similar to this study, other studies have resulted in variability between subjects in the impact that social story interventions have on them. Scattone et al. (2002) investigated the effectiveness of social stories on reducing disruptive behaviors (tipping, staring, and shouting) of three students diagnosed with autism, and although they found a reduction in the disruptive behaviors from baseline to intervention the results were variable for each participant. In a study by Swaggart et al. (1995), the subjects with Autistic Spectrum Disorders (ASD) were able to empirically demonstrate a measurable increase in appropriate greeting and sharing. Although descriptive statistics were used to analyze the data in this study, a majority of the subjects also exhibited a similar impact from the social story interventions, where

they were able to increase their frequency of the targeted social skills during the intervention phases. During intervention phases, a majority of the subjects did increase the frequency of their social pragmatic skills; however, the extent to which individual subjects were impacted was variable.

In a comparison between initial and reversal baselines, descriptive statistics (frequency distributions & percentages) indicate that the students maintained or increased their social pragmatic skills. Other studies have also gathered evidence indicating that the effects of social story intervention can be maintained over time by students (Crozier & Tincani, 2007; Kuoch & Mirenda, 2003; Thiemann & Goldstein, 2001). Interestingly, during the reversal baseline phase most of the subjects' exhibition of pragmatic social skills reverted back to frequencies that were demonstrated during the initial baseline phase. In a research synthesis, Sansoti et al. (2004) noted a return to baseline behavior after the withdrawal of the social story, and they suggest that continual implementation of social stories may be necessary to maintain the behavioral effects. This study supports their findings, as the subjects had notable increases in the social pragmatic skills during the intervention phases and then reverted back to initial baseline frequencies during the reversal phase when the social stories were withdrawn.

This is one of a few studies that have examined the impact of social stories on students with learning disabilities; it is a partial replication of the study conducted by Crozier & Ticani (2005). According to Crozier & Ticani (2005), the subject with ASD reduced his talking out behavior in response to the

intervention and continued to exhibit low levels of this target behavior two weeks after the intervention. Since this study examined the impact of two social stories in increasing targeted social skills for multiple participants and verbal prompts were not incorporated in the intervention as Crozier & Ticani (2005) did in Phase C of their study, the results are not entirely comparable. The subjects in this study were impacted by the social story interventions by increasing the exhibition of their social pragmatic skills; however, individual responses to the interventions were variable. Furthermore, the subjects exhibited an increase or maintenance of the social skills at the reversal baseline that were similar to the initial baseline. In comparison to the study conducted by Crozier & Ticani (2005), the subjects in this study also were impacted by the social story interventions, causing an increase in the desired behaviors of asking a question in class and staying on topic in class during intervention phases and an increase or maintenance of the skills during the reversal baseline. Converse to a majority of studies that found social stories were effective in decreasing targeted behaviors from baseline to intervention (Adams, Gouvousis, VanLue, & Waldron, 2004; Kuttler, Myles, & Carlson, 1998; Lorimer, Simpson, Myles, & Ganz, 2002), this study examined how targeted social skills could be increased with social story interventions.

Findings for this study may not be representative of the learning disabled population due to limitations including: severity of disabilities; convenience sampling; story construction and implementation; and researcher perspectives; therefore, results should be interpreted with caution.

Conclusions

The results of this study generally confirmed the findings of previous related studies. The selected students in grades two through four with learning disabilities were impacted by the social story interventions and were successful in increasing the frequencies of their social pragmatic skills during the intervention phases and in a comparison between baseline phases. Social story interventions have successful intervention in increasing the target behaviors of subjects with Autistic Spectrum Disorders (ASD) (Barry & Burlew, 2004; Crozier & Tincani, 2007; Delano & Snell, 2006; Hagiwara & Myles, 1999; Kuoch & Mirenda, 2003; Rowe, 1999; Rogers & Myles, 2001; Scattone et al., 2006; Swaggart et al., 1995; and Thiemann & Goldstein, 2001), yet subjects with other disabilities that exhibit similar behavioral deficits have not been studied.

There have not been any specific guidelines set forth by Carol Gray or other researchers regarding the efficacy of social story intervention for subjects with disabilities other than Autistic Spectrum Disorders (ASD). The findings of this study suggest that social story intervention impacted students in second through fourth grade with learning disabilities; they were able to increase or maintain the social pragmatic skills during the intervention phases and between baselines. Students with disabilities other than ASD that have similar behavioral deficits, such as those with learning disabilities, must also be considered in studies to determine the efficacy of the social story intervention. Further research with the learning disabled population in warranted.

Recommendations for Further Practice and Research

Based upon the findings and conclusions of the researcher, the following suggestions are presented:

1. Further studies should be conducted with larger populations to confirm the findings of this study.

2. Researchers should consider how social story interventions may impact specific individuals that exhibit behavioral difficulties and/or types of disabilities.

3. Further studies should be conducted to explore the effectiveness of social stories in isolation rather than combining the intervention with other procedures.

4. Further studies should be conducted to determine if variations in story construction alter the efficacy of the social story intervention.

5. Researchers should consider broadening their subject population to include other disabilities that exhibit similar social deficits and behavioral problems as those with Autistic Spectrum Disorders.

6. Researchers should attempt to specifically define the parameters in which social story intervention is most effective for subjects, including intellectual functioning, communication skills, and severity of disabilities.

7. Teachers, behavior therapists, and parents should document changes in behavior when implementing social story interventions in order to determine which social story construction model, intervention techniques, and amount of stories and/or target skills had the most effective impact.

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APPENDIX A

Principal Permission Form

TOWNSHIP BOARD OF EDUCATION

December 1, 2008

To Whom It May Concern:

    Kristine Egrie has permission to conduct her graduate research project at our school during this school year.

    Any concerns or questions, please contact me.

Sincerely,

Mrs Klausner

Mrs. Klausner
Principal, ████████ School

Telephone: ████████

APPENDIX B

Parental Consent Form

Dear Parent/Guardian:

I am a graduate student in the Special Educational Services Department at Rowan University. I will be conducting a research project under the supervision of Dr. Jay Kuder as part of my master's dissertation concerning how Social Stories improve the social communication skills of students with learning disabilities. I am requesting permission for your child to participate in this research. The goal of the study is to determine how Social Stories improve the social communication skills of students in grades two through four with learning disabilities, specifically asking questions and staying on topic.

Each child will be read a Social Story at the beginning of their reading instruction. The two Social Stories that will be read and discussed during this study explain the social skills of asking questions and staying on topic. While the students are participating in their reading instruction, my assistant will observe their behaviors in class. The students' behaviors will be recorded on a data sheet, which I will retain at the conclusion of the study. To preserve each child's confidentiality only pseudonyms will be used to identify individuals. All data will be reported both in terms of group and individual results.

Your decision whether or not to allow your child to participate in this study will have absolutely no effect on your child's standing in his/her class. At the conclusion of the study a summary of the group results will be made available to all interested parents. If you have any questions or concerns, please contact me at ████████████ or you may contact Dr. Jay Kuder at (856) 256-4500 ext. 3797. Thank you.

Sincerely,

Kristine Egrie

Please indicate whether or not you wish to have your child participate in this study by checking the appropriate statement below and returning this letter to your child's teacher by Feb.3.

____ I grant permission for my child _____to participate in this study.

____ I do not grant permission for my child _____to participate in this study.

_____   _____
(Parent/Guardian signature   (Date)

APPENDIX C

Data Sheet

Data Sheet (/   /   )

Students	Raised Hand	Waited for Teacher	Asked Question	Listened to Response	Listened to Discussion	Stayed on Topic
Subject A						
Subject B						
Subject C						
Subject D						
Subject E						
Subject F						

APPENDIX D

Phase B Social Story Instrument

Asking a Question in Class

When I am at school, sometimes I have a question. When I want to ask a question, I try to raise my hand and wait for my teacher to call my name. If I raise my hand, my teacher will know that I want to ask a question. When my teacher calls my name I can ask my question. My teacher will try to answer my question. My teacher is happy when I raise my hand to ask a question.

Comprehension Questions

1. When I have a question what is the first thing that I should do?

2. After I raise my hand, when can I ask my question?

3. What will happen after I ask a question?

4. How will my teacher feel if I raise my hand and wait?

APPENDIX E

Phase C Social Story Instrument

Staying on Topic in Class

When I am at school, sometimes I want to share what I know. When I want to talk, I try to listen to what my teacher and my class are talking about. I try to think about what they are talking about and what I know. If I raise my hand, my teacher will know that I want to talk. When my teacher calls my name I can talk about what I know.

My teacher and my class are happy when I listen to what they are talking about and say what I know.

My teacher is happy when I raise my hand to talk.

Comprehension Questions

1. What should I do when I want to talk in class?

2. What do I have to think about when I want to talk in class?

3. How will my teacher know that I want to talk?

4. How will my class and teacher feel if I listen to what they are talking about?