Use of social stories for students with autism spectrum disorders

Alicia Ann Karwal

University of Northern Iowa

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Use of social stories for students with autism spectrum disorders

Abstract
Social stories have been widely used as an intervention for children on the Autism Spectrum. Educators and other service providers of students diagnosed with an Autism Spectrum Disorder are continually looking for strategies that will allow for their students to have more typical social experiences and greater quality of life. Some controversy exists concerning the success of social stories as an effective intervention. This paper will briefly examine characteristics of individuals diagnosed with an Autism Spectrum Disorder. It will then explore using social stories with children affected by an Autism Spectrum Disorder. Finally, it will consider a variety of purposes for implementing social stories and how to do so effectively.
USE OF SOCIAL STORIES FOR STUDENTS WITH AUTISM SPECTRUM DISORDERS

A Literature Review

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Alicia Ann Karwal

University of Northern Iowa

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Lynn E. Nielsen
Date Approved: Oct 22, 2007
Graduate Faculty Reader

Rick C. Traw
Date Approved: Oct 25, 2007
Graduate Faculty Reader

Mary C. Herring
Date Approved: Oct 25, 2007
Head, Department of Curriculum and Instruction
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Abstract

Social stories have been widely used as an intervention for children on the Autism Spectrum. Educators and other service providers of students diagnosed with an Autism Spectrum Disorder are continually looking for strategies that will allow for their students to have more typical social experiences and greater quality of life. Some controversy exists concerning the success of social stories as an effective intervention. This paper will briefly examine characteristics of individuals diagnosed with an Autism Spectrum Disorder. It will then explore using social stories with children affected by an Autism Spectrum Disorder. Finally, it will consider a variety of purposes for implementing social stories and how to do so effectively.
Introduction

As I walk into the school cafeteria I am confronted by familiar sounds, sights, and smells. Children are laughing, trays are clanging, and voices are rising. The room is crowded and the lights are bright. The smell of fried chicken mixed with the sweat from the children who just finished recess is almost overpowering. Some students are already seated and are talking with friends while eating. Others are waiting in the line to pay and then go on to receive their steaming, plentiful portions. The students talk and laugh with one another as they stand diligently, waiting in the seemingly endless line. Then I notice one of my own students. He is pacing frantically, amidst the line, and muttering to himself. Unbeknownst to him, some of the other children have begun to stare, while still others seem oblivious. He is overwhelmed by the noises echoing loudly from the cement walls. He feels confined by the boundaries of the line in which he is meant to stand. He feels sick to his stomach from the smells that surround him. He is not comforted by the familiar faces and voices of his peers for he is unsure of how to interact with them. His only thought is to get away from this madness. Just as he begins to make a streamline for the exit, I intervene, but it is too late. His agitated state has left him unable to communicate in an appropriate manner. He appears angered, almost in tears, at this loss of control. He moves quickly to the quiet of our classroom as I follow. He comforts himself by rocking in the corner chair. After a few quiet moments, once he feels safe again in this place of comfort, I know that I can approach him and that he may be able to respond to some of my questions about what has just occurred.

Where do I begin? How do I ensure that this child can do something as simple and as necessary as eating his lunch? The answer is not through harsh demands for compliance. The answer is not to immediately have this child return to this place that caused him to unravel. This
child has been diagnosed with Autism. He does not see the world as we see it. For him, the school cafeteria is a threatening place of overwhelming sensory experiences. For him, navigating the social world is confusing and isolating. Together, we begin to write a social story. The story begins with how he feels as he enters the school cafeteria and is expected to conform to our rules of standing in line. It then describes how he can make that scary place become a place that he is comfortable in and allows him to learn effective strategies for coping. When the social story is completed, we read it together.

Methodology

Social stories, pioneered by Carol Gray (2007), have been used for many years by educators, psychologists, and parents. Support for the use of social stories for students with Autism Spectrum Disorders was readily available. However, my attempts to locate articles and books that had data to support the effectiveness and use of social stories as an intervention was limited. While there have been a few studies done on the effectiveness of social stories as an isolated intervention, a greater number of studies involved the simultaneous use of social stories in addition to other interventions. I was able to locate many articles through resources at Rod Library and the local Area Education Agency. I borrowed books from our district's professional library, the professional library kept at our school, and from parent advocates whom I work with closely. The Autism Speaks website was helpful in providing a basic understanding of the disorder and its prevalence. Information from seminars that I have attended also provided useful information in relation to the topic.

After researching and collecting many resources, I began reading and sorting through the sources that would be most helpful for the identified sections of my paper. The majority of my resources are current, within the last ten years. I was selective of statistical information and facts
on Autism Spectrum Disorders, as that has altered immensely over the years. For that information, I used only the most current resources. Some of the information on social stories, although dated, remains appropriate for the purposes of this paper.

Literature Review

Definition of a Social Story

“Social stories are individualized short stories that may increase appropriate social interactions of children with ASD (Autism Spectrum Disorders) by teaching them the relevant components of a given social situation” (as cited by Scattone, Tingstrom, and Wilczynski, 2006, p. 211). In an alternate source, Gray (2003) asserts:

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 format. The goal of a social story is to share accurate social information in a patient and reassuring manner that is easily understood by its audience. (p. 2)

According to Baker (2003), a social story begins with the child’s perspective of a particular situation. It then addresses what is happening in the situation and provides rationale to enable the child to develop a better understanding of the social situation. It may also include how others think and feel. Social stories typically contain at least one directive statement, telling a child to do something a particular way. Social rules tend to be more abstract in nature, making it difficult for the student with an Autism Spectrum Disorder to decode a situation. A social story provides the individual with specific social cues for a situation in a more concrete way.

There are no limits to the topics that can be learned through the use of a social story. Social stories are meant to be individualized for each student. Depending on the student’s age and cognitive level of functioning, a social story may contain more or less detail. Some social stories include visuals while others may use text only. Visuals within social stories can be used to support students that are nonreaders. It is also highly accepted that students with Autism
Spectrum Disorders tend to be visual learners and therefore benefit from the use of visual cues in addition to the text.

A social story should be read repeatedly to or by the child until it is over-learned. Stories should then be read prior to the problematic situation. It is important that stories be written at an appropriate level for the intended child to comprehend. The stories are meant to allow the child greater independence in a social area. It is crucial that comprehension of the story does not impede the desired independence in any way.

**Description of Autism Spectrum Disorders**

According to Autism Speaks (2007), the definition of Autism is stated as:

Autism is a complex neurobiological disorder that typically lasts throughout a person’s lifetime. It is part of a group of disorders known as Autism Spectrum Disorders (ASD). Today, 1 in 150 individuals is diagnosed with autism, making it more common than pediatric cancer, diabetes, and AIDS combined. (p. 1)

The National Research Council reports that Autism Spectrum Disorders (ASD) “is an umbrella term that includes autism, Asperger’s Syndrome, atypical autism, pervasive developmental disorder, and childhood disintegrative disorder” (as cited by Crozier and Sileo, 2005, p.26). Any of the aforementioned disorders may cause impairments in communication, social interaction, and behavior that can range from mild to severe.

There are varying criteria for each specific disorder under the umbrella of Autism Spectrum Disorder. Some children on the spectrum are higher functioning cognitively or socially while others are much lower functioning. “A child with autism functioning at a lower cognitive level ‘lives in a world of his own’, whereas the higher functioning child with autism spectrum disorder ‘lives in our world but in his own way’” (as cited by Lorman Education Services, 2005, p. 5). This assertion provides insight on some of the difficulties individuals with Autism Spectrum Disorders may have as they try to fit into our world and our way of thinking.
Characteristics amongst individuals diagnosed with an Autism Spectrum Disorder can vary greatly. Below are some of the more general characteristics of two different diagnoses.

Baker (2001) acknowledges the diagnostic criteria for characterizing autism from the American Psychiatric Association as involving deficits in three general areas:

1. Social interaction.
2. Communication.
3. Repetitive and ritualistic behaviors (p. xi).

According to the DSM IV-R (1994) children with Asperger Syndrome meet the following criteria:

1. Impairment of social interaction.
2. Impairment of social communication.
3. Impairment of social imagination, flexible thinking and imaginative play.
4. Absence or a significant delay in cognitive development.
5. Absence or general delay in language development (Lorman Education Services, 2005, p. 4).

While social stories are not limited to use for students with Autism Spectrum Disorders, their use with students of this population is well documented. Students affected by these disorders share the impairment of understanding the unwritten rules of social language and social settings. According to Gray (2007), “Although social stories were first developed for use with children with ASD, the approach has also been successful with children, adolescents, and adults with ASD and other social and communication delays and differences, as well as individuals developing normally” (p. 1)
Desired Effects of Using Social Stories

There are a variety of desired effects one might attain by using social stories with students on the Autism Spectrum. One effect is to prepare them for social situations that might otherwise be awkward or confusing to them. Another possible goal is to help the student understand how a current behavior choice is affecting them. A social story might explore the consequences of a specific behavior and provide an alternative or replacement behavior that is deemed more appropriate. Perhaps most importantly, social stories can help a student interpret the social language and social cues of others. Myles and Adreon (2001) identify the following six social deficits that can cause problems for individuals, especially those in adolescence:

1. Lack of understanding that nonverbal cues such as facial expressions, gestures, proximity, and eye contact convey meaning and attitudes.
2. Difficulty using language to initiate or maintain a conversation.
3. A tendency to interpret words or phrases concretely.
4. Difficulty realizing that other people's perspective in conversation must be considered.
5. Failure to understand the unstated rules of the hidden curriculum or the set of rules that everyone knows, but that has not been directly taught.
6. Lack of awareness that what you say to a given person in one conversation may impact how that individual interacts with you in the future (pp. 15-17).

The preceding six areas can be addressed in many ways through the use of social stories. For example, if a child does not understand a hidden or unwritten rule in regard to cursing, a story may be written to help the individual differentiate between social groups or settings and to better understand the importance of knowing their social audience. Through the use of a social
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story, they can be taught that cursing may be tolerated or accepted by peers, but it will not be tolerated by teachers, and you may face consequences for cursing in their presence. Social stories are meant to take away the mystery of social situations that an individual will encounter. One desired effect of a social story such as this would be to allow the individual to act appropriately in the presence of teachers and other like adults while having the freedom to act as an adolescent with peers if he so desires.

The nature of social situations can be extremely subjective and can vary immensely among different individuals and social groups. Due to this fact, social stories such as the one above can be controversial at times, and it is important that all people who are involved in the wellbeing of the individual with an Autism Spectrum Disorder agree on what to teach the individual about social situations through the use of social stories. While teachers may find a social story about acceptable and unacceptable times for cursing appropriate, parents may disagree. Both parties must come to a shared understanding so that the social needs of the individual can best be met.

Social Stories Used for Teaching Skill Acquisition

One way in which social stories can be used is to teach skill acquisition. When individuals need to be prepared for a new situation, a social story can help teach the necessary information for performance and social responsibility for that particular setting or situation. A social story can also be used to teach skills that are often innately acquired skills for typically developing peers, but need to be more directly taught for students with Autism Spectrum Disorders.

Examples of using social stories to teach skill acquisition often involve the “how to” components for varying skills. A social story may be used to teach how to play a game such as
soccer, or tag, at recess. Other skills that may need to be directly taught to students on the Autism Spectrum include etiquette in a restaurant or public restroom, how to dress for different events or seasons, or how to respond to an unfamiliar adult/peer versus a familiar adult/peer. According to Myles and Adreon (2001), these skills are often part of what is considered the hidden curriculum. Learning the hidden curriculum can be especially difficult for students with an Autism Spectrum Disorder.

Social Stories Used for Decreasing Inappropriate Behavior

Social stories can also be used to decrease an existing inappropriate behavior. Often, the social story is written as a script of the targeted situation in which the behavior occurs with the appropriate responses the student is expected to make. This allows for the student to understand the behavior as it is occurring and to learn more appropriate replacement behaviors. For example, if a student exhibits climbing on tables or using the restroom multiple times a day prior to non-preferred activities, it may be hypothesized that the child is trying to escape those non-preferred activities. Therefore, a social story could address teaching the child to request a break which is a more appropriate and thus, more socially acceptable, way to escape.

In one study conducted by Crozier and Tincani (2005), the identified target behavior for an 8-year-old boy who had been diagnosed with autism was talking out, or talking to teachers and other adults without raising his hand or being called upon. Data was collected during a 30 minute observation period with the average number of talk-outs recorded. Baseline data averaged 11.2 talk-outs. A modified social story was introduced with the student, deviating slightly from Gray’s guidelines for writing a social story. The data collected demonstrated a decrease in talk-outs to 2.3 per observation period. The social story was eventually accompanied by verbal prompts after this initial data period, as the number of talk-outs rose to 8 talk-outs per
observation period. Consistency in data supports that the modified intervention including use of
the social story and verbal prompts caused the student’s talking out to be reduced significantly
with an average of 0.2 talk-outs per observation period.

In another independent study by Scattone, Wilczynski, Edwards, and Rabian (2002),
social stories were used to decrease disruptive behaviors in three students ranging in age between
seven and fifteen. The targeted behaviors for these students included chair tipping, which often
resulted in the student falling, shouting, and staring inappropriately at females during recess.
Once social stories were introduced, the researchers stated, “All three participants demonstrated
a reduction in their respective disruptive behaviors” (Scattone, Wilczynski, Edwards, and
Rabian, 2002, p. 539). Specific levels of improvement did vary amongst the three individuals
with autism.

Social Stories Used for Increasing Pro-Social Behavior

Some social stories may be used to increase pro-social behavior in students. Individuals
with Autism Spectrum Disorders often have difficulty interacting socially with peers and adults.
“Understanding what to do or say in social situations is a core problem for autistic individuals”
(Baker, 2001, p. xi). While social interaction can occur in a variety of settings with a variety of
people, a few specific settings and/or people can be targeted for teaching the pro-social behavior
initially. The hope is that the behavior will eventually generalize to other settings. For example,
appropriately greeting others is a skill that students can learn at a young age that will carry over
as the child becomes older. A social story can be written that addresses greeting others in a
specific setting. Teachers or parents may try to teach the skill in a smaller, less intrusive setting
such as one on one with a familiar teacher at school or with family members upon waking up in
the morning. Subsequent to the child experiencing success in one setting, one can attempt
generalization in a larger setting or with a less familiar individual.

Once a teacher and student move into generalization of skills, it is important that
consistency be maintained. All major caregivers for a particular student should be aware
of the particular skill(s) being work on, so they can prompt that skill consistently across
situations and offer similar corrective feedback. (Baker, 2001, p. xix)

One of the more prominent advantages in teaching or increasing pro-social behaviors is
that “Social Stories transfer stimulus control from the teacher and peers directly to the child with
autism” (Scattone, Tingstrom, and Wilczynski, 2006, p. 211). This makes the child responsible
for the behavior outcome. Often, individuals with Autism Spectrum Disorders may possess a
lack of awareness or insight into how a social rule or specific behavior applies to them. They
may not fully understand the relationship between cause and effect the way neurologically
typical individuals might.

A study conducted by Scattone, Tingstrom, and Wilczynski (2006), examined three
elementary age participants diagnosed with an Autism Spectrum Disorder. Social stories were
used as a sole intervention to increase appropriate social interactions during free-time. The
social interactions specifically being sought were initiating and responding to peers during free-
time activities such as lunch and recess. “Appropriate social interactions were defined as a
verbal, physical, or gestural initiation or response to a peer” (Scattone, Tingstrom, and
Wilczynski, 2006, p. 214). Each of the desired social interactions was outlined in the social story
used with the child. The results of the study indicate that two out of three of the participants
demonstrated increases in appropriate social interactions. The study notes “a residual effect
appears to be a modification of the behavior of the rest of the class that was exposed to the daily
reading of the story. Subsequently, on several occasions the peers were observed to comply with
the rules of the story by sharing toys and engaging in conversation” (Scattone, Tingstrom, and Wilczynski, 2006, p. 218).

In another study by Delano and Snell (2006), participants included three elementary age students with autism and six non-disabled peers. Each participant with autism was paired with two same-age, non-disabled peers. One peer was used during intervention sessions while the second peer was used for generalization probes. Social stories were used as the main intervention to increase social engagement during play. Each intervention session included reading the social story, a comprehension check, and play time. Once specific criterion was met, generalization probes took place in the general education setting with no social story read prior to play. “Following implementation of the social story intervention, all three participants showed an increase in the duration of time they spent socially engaged with both a training peer and a novel peer in the intervention setting” (Delano and Snell, 2006, p. 39). Furthermore, the results of this study revealed that all three students with autism exhibited an increase in their use of the target social behaviors.

How Social Stories Are Created

According to Gray (2000) there are four basic types of sentences to be used in writing social stories. They are descriptive, directive, perspective, and affirmative sentences. Descriptive sentences are the most frequently used sentences. They tell factual information about what is happening during an event. They do not include opinions or assumptions. Directive sentences provide the individual possible responses to a situation, or specific instructions to direct behavior. Perspective sentences offer information about the thoughts, feelings, opinions, or motivations of others in the event, or in response to the behavior of the student with Autism Spectrum Disorders. Affirmative sentences typically follow a descriptive,
directive, or perspective sentence. They are intended to enhance the meaning of other sentences. An affirmative sentence will often stress the importance of the desired action, refer to a rule or law, or reassure the student with an Autism Spectrum Disorder in some way. Additional types of sentences include partial, control, and cooperative.

When writing a social story, it is crucial to first determine the child’s perspective of the situation. It should not be assumed that the author of the social story understands the feelings or exact perceptions of the child. “The structure of the story comprises an introduction that clearly identifies the topic, a body that adds detail and knowledge and a conclusion that summarizes and reinforces the information and any new suggestions” (Attwood, 2007, p. 69).

Social stories can be written by any person who works or lives with an individual with an Autism Spectrum Disorder. This might include a teacher, paraprofessional, school psychologist, speech and language pathologist, therapist, parent, or other family members. It is important that the author of a social story has an understanding of the varied components that make a social story and the process in which it is constructed.

*How Social Stories Are Used*

Social stories can be used in a multitude of ways. “Social stories have been used to decrease fear, aggression, and obsessions; introduce a change in routine; teach academic skills; and teach appropriate social behavior” (as cited by Scattone, Tingstrom, and Wilczynski, 2006, p. 211). In another report, the following additional uses for social stories are identified:

1. Describing a situation, including social cues and responses in a non-threatening manner.
2. Personalizing social skills instruction.
3. Teaching routines or student adjustment to routine changes.
4. Teaching academic material in a realistic social setting, thereby assisting in generalization.

5. Addressing myriad behaviors, such as aggression, obsessive behavior, and fear (as cited by Hagiwara and Myles, 1999, p. 82).

Social stories are intended to prepare the individual for the appropriate social responses just prior to a situation occurring. If a child has difficulty joining in with peers at recess, he might read a social story detailing how and why you would ask a friend to play at recess. The student would read the social story just before going to recess. He may even determine which friend he will choose to interact with prior to the start of recess. This intervention is done in hopes of allowing the individual to successfully interact with his peers at recess.

It is important to note that social stories should also include stories of the social successes that students experience. They should be used to emphasize student achievements, as well as, social knowledge. As social stories are introduced to students, some authors maintain:

The first Social Story, and at least 50 percent of subsequent Social Stories, should describe, affirm and consolidate existing abilities and knowledge and what the child does well, which avoids the problem of a Social Story being associated only with ignorance or failure. (Attwood, 2007, p. 69)

This allows greater potential success when using a social story to teach new social knowledge because students have had positive experiences with this type of teaching tool in the past.

The use of social stories requires time and thoughtfully planned implementation in order to be an effective intervention. The time and planning necessary for effective implementation becomes a collaborative opportunity for teachers, paraprofessionals, school psychologists, and other professionals.
Crozier and Sileo (2005) name the following six steps for the effective use of social stories:

1. Identifying Target Behavior.
2. Conducting Functional Assessment.
3. Making a Plan to Include Social Stories.
4. Writing the Social Story.
5. Using the Social Story With the Student.
6. Collecting More Data (pp. 27-29).

In step one, a team member must identify and define the target behavior. This can be done through both informal and formal observation of the student. Anecdotal records can be completed while observations are conducted. It can be useful to have multiple people conduct observations of the student on several different occasions. The following is a suggestion for how behaviors needing to be addressed may be prioritized:

1. According to the level of risk to the student or others.
2. According to how irritating the behavior is.
3. According to how isolating the behavior is.
4. The behavior most likely to respond quickly to intervention.
5. The first behavior in an escalation chain.
6. The most difficult or entrenched behavior a student displays (as cited in Crozier and Sileo, 2005, p. 27).

In step two, a more comprehensive functional assessment is done. This information will allow one to hypothesize the cause of the behavior or what maintains the behavior. One method for collecting this data is known as the ABC method which considers the antecedent, behavior, and consequence as they occur in relation to a particular behavior. In addition to further
observations, interviews and self-assessments may also be used to collect data for a functional assessment. Collecting data on the frequency and duration of the behavior over several days will likely provide valuable information. It may also be beneficial to have more than one person collecting data. The totality of the data collected allows for a more accurate baseline to be determined so that the identified behavior can be assessed after the social story intervention is in place.

In steps three and four, a plan that includes the use of social stories is developed to address the problem behavior. It is recommended that, “Social stories can be included as part of a comprehensive plan to change the student’s behavior” (Crozier and Sileo, 2005, p. 28). A story is then written based on the information that was gathered during the functional assessment.

In step five, you introduce the social story to the student. It is important to initially check for understanding to ensure that the student comprehends the story as intended. The length of time that an individual will need to use a social story varies. The social story should be built into the student’s daily schedule and can be read independently or to an adult. Other ways the social story can be used include having an adult read the story to the student or having the student listen to a recording of the story. Even once a story appears to be mastered by the student, it may be necessary to revisit the story occasionally.

In the final step, once the social story has been implemented, the teacher or other adult should continue to collect data on the behavior. It is important that the data be collected in the same manner that it was during the functional assessment or baseline period. The data can then be compared to the baseline data and should be used to make decisions about the effect of the social story on the targeted behavior. Some modifications to the social story, or how it is used,
may be necessary. Again, it is highly advantageous to have more than one person collecting data if possible.

Social stories should be kept in a place that is accessible to the student using them. Some possible locations for storage of social stories are in a three-ring binder inside the student’s desk, velcroed to the student’s desk, or in a location specific to the situation which the social story discusses. Eventually, some social stories will no longer be needed by the student while new ones may need to be written. A student’s behavior will determine the need for existing, and new, social stories.

Effectiveness of Social Stories Used for Students with ASD

Temple Grandin is a notable doctor of animal science and an adult living with Autism. She discusses the importance of visual imagery for individuals with Autism:

Being autistic, I don’t naturally assimilate information that most people take for granted. Instead, I store information in my head as if it were on a CD-ROM disc. When I recall something I have learned, I replay the video in my imagination. The videos in my memory are always specific. I can run these images over and over and study them. (Grandin, 2005, pp. 24-25)

Social stories include many elements that are considered to be effective, good practice in working with individuals with Autism Spectrum Disorders. Ensuring that social stories have these elements allows the individual greater potential for success. Social stories are:

2. Permanent, allowing the child to revisit the same story as many times as needed.
3. Written in simple language, reflecting the child’s language levels and current vocabulary.
4. Based on careful assessments of the child through observation, conversation with the child, and interviews with others who know the child.
5. Focused on an area of core need such as social interaction and communication.

6. Factual, providing information on who is doing what and why.

7. Unusual in focusing directly on what people are thinking and feeling, and how that relates to the individual’s behavior.

8. Situation specific.


Attwood (2007) maintains, “Carol Gray’s original work on Social Stories has now been examined by many research studies and found to be remarkably effective in improving social understanding and social behaviour in children with autism and Asperger’s syndrome” (p. 70).

Benefits of Social Stories and Implications for Educators and Families

There are many noted benefits of using social stories with children diagnosed with an Autism Spectrum Disorder in both home and school settings. One chief benefit is that “they capitalize on the visual learning strengths of students with autism” (as cited by Crozier and Tincani, 2005, p. 150). Other benefits include students using a story book format that is less stigmatizing as it provides a more conventional tool for learning in the educational setting. It has been noted that the stories allow for more concrete instruction and students are able to revisit the stories until the concept or skill has been mastered. Both teachers and parents have found the use of social stories to be a simple and user-friendly means for teaching social learning. (as cited by Crozier and Tincani, 2005, p. 150).

Additionally, social stories also help to increase the social understanding of those that work with students with Autism Spectrum Disorders. Through the observation and planning process prior to implementing the story, the person working with the child learns more about the
child’s perspective and current understanding of the situation. “The result is often an improvement of social understanding on both sides of the social equation” (Gray, 2000, pp. 13-10).

“Social stories are convenient, are unobtrusive, and may draw on a strength many children with autism demonstrate (i.e., adherence to rules/routines)” (Scattone, Wilczynski, Edwards, and Rabian, 2002, p. 540). Furthermore, the authors make the point that social stories are often a less time consuming and labor intensive practice when working to improve social behaviors than some alternatives.

Perhaps most importantly, social stories help individuals with Autism Spectrum Disorders become more socially accepted in our culture. Their behaviors in school or the workplace become less discrepant from their peers. “Social Stories use positive language and a constructive approach” (Attwood, 2007, p. 70). In turn, affected individuals may feel more positive about their experiences and relationships gaining greater confidence.

Limitations of Social Stories

While much of the available research supports the use of social stories, there remain some limitations in the use of this intervention. In order to truly benefit students, a social story must be written within the reading comprehension level of the student. When a social story is too difficult, the story becomes an ineffective means for teaching the student about a particular social situation or desired behavior. In addition to content that is too difficult for the student to comprehend, it is important that the stories do not assume the student has other skills that may be pertinent to the current social story or situation. In a report by Smith (2001) “teachers realized that their first story drafts required a skill that the child did not have” (p. 344). In this case, it is
crucial to either revise the social story or to find a means for teaching the necessary preceding skill.

Despite the perception that many students on the Autism Spectrum share a high interest and motivation for computer use, there is limited research supporting the use of technology with social stories. Research suggests that social stories may need to be traditionally formatted. "Multimedia social stories have not yet been demonstrated to be effective" (as cited in Crozier and Sileo, 2005, p. 29). However, Hagiwara and Myles (1999) believed that the use of visual symbols, social stories, and computer-based instruction used in their study demonstrated that "the intervention appeared to have possible effects and applicability for children and youth with autism in the current educational system" (p. 92). Through the continued development of social story interventions and with further research it may be very possible to link technology to teaching students with Autism Spectrum Disorders.

Finally, the use of social stories has not proven to be highly effective as a sole intervention for students with Autism Spectrum Disorders. Students on the Autism Spectrum exhibit a range of behavioral needs. "Other active treatment variables (e.g., prompting, reinforcement paradigms) implemented concurrently with Social Stories may be necessary to create the desired change in behaviors" (Sansosti, Powell-Smith, and Kincaid, 2004, p. 202). Consequently, social stories can be an effective part of a more comprehensive behavior support plan. However, as an isolated intervention technique, social stories may not achieve the desired results. In support of this noted limitation, some researchers believe, "Social stories are not designed to address all behavioral needs and should therefore always be implemented as part of a comprehensive educational and behavioral plan" (Crozier and Sileo, 2005, p. 29).
In a 2001 study conducted by Thiemann and Goldstein, five students with autism and social deficits were targeted with an intervention that combined the use of social stories, cue cards, role-play, and video feedback. While the intervention did help to increase a variety of social skills "the combination of Social Stories with other interventions prohibits conclusions being drawn on the effectiveness of Social Stories individually" (Crozier and Tincani, 2005, p. 151).

Conclusion and Recommendations

Social situations are an inevitable part of life. For students with an Autism Spectrum Disorder, these situations present great challenges. We must prepare our students so that they may rise to such challenges with knowledge and confidence. We can begin to do so through the use of social stories. After reviewing the literature surrounding the use of social stories with students on the Autism Spectrum, I conclude that the stories can be part of an effective intervention provided some specific recommendations.

First, I highly recommend that social stories be used in combination with other supports, such as positive reinforcement, clearly defined expectations, and visual or verbal cues. The implementation of other positive behavior supports allows for a greater likelihood that students will experience more meaningful and successful social experiences. While the research supports that social stories have a positive correlation with increasing appropriate social behaviors and teaching new skills to students with Autism Spectrum Disorders, I do not feel that the use of social stories alone is the most effective means for teaching a new social skill. Nor will social stories used as the sole intervention be as effective in increasing a desired behavior or decreasing an inappropriate behavior. I believe a combination of supports can produce improved social skills and greater social understanding for individuals with Autism Spectrum Disorders. Simply
addressing an issue with a social story and no inclusion of intermittent positive reinforcement, necessary visual or verbal cueing, or the consistency of a student’s positive behavior support plan does not typically achieve the same levels of success or independence for the student. Furthermore, the stories allow for greater success when implemented by empathetic and knowledgeable persons.

Second, social stories can and should be used for a variety of purposes. It has been my experience that social stories can be used to address a multitude of inappropriate or disruptive behaviors, as well as, teaching pro-social behaviors or skill acquisition. I have developed and used many social stories with students, some of which include: following directions, how to sit during floor time activities, toileting, walking in line, fire drills, asking a friend to play, getting a teacher’s attention, not harming others, winning and losing, interrupting, answering the phone, eating with silverware, touching others, completing work, being safe in the classroom, and using nice words. The social stories can be successfully used with both low and high functioning students on the Autism Spectrum.

Finally, through my own experiences in working with students with Autism Spectrum Disorders, I believe that any intervention needs to be individualized for the student. Even when considering the students that I work with who are higher functioning cognitively, there is a very broad range of abilities amongst students. Their social, behavioral, and academic needs vary greatly. Due to these factors, I feel that the greatest success is going to come from writing each social story for the individual child and in relation to the specific purpose at that time. It is expected that students will experience greater social success and quality of life when social stories are individualized for the student and specific situation. Stories may need to be modified even as they are used with that child. Some stories can be altered for use with other students.
experiencing similar social experiences. However, it is important that the story be reflective of the situation for each child, as every child has different perceptions, feelings, and degrees of social knowledge.

It is a new day. I have just read through a social story with my student about eating lunch in the school cafeteria. Together, we walk into the cafeteria to confront all of the sensations waiting to overwhelm him. However, this time is different. Although he enters the large, echoing cafeteria with mild, yet noticeable hesitation, there is also an air of confidence as he walks through the doors of the cafeteria entrance. This setting, once so overwhelming that it prevented my student from experiencing it, is now a place that he has learned the social rules for. He is wearing earplugs, almost indistinguishable to the unknowing eye. He carries a visual cue card to provide him structure during this highly unstructured time. It details his plan while in the cafeteria: get milk, stand in line, pay, get silverware, get food from lunchroom servers, sit down, eat, dump lunch tray, wait to be dismissed, and finally, walk back to the classroom. Once he can successfully manage this agenda, we will perhaps create another social story about social interaction with peers during lunch. For this moment, we celebrate his successful experience of eating in the cafeteria alongside his neurotypical peers.
References


Lorman Education Services (2005). *Individuals with asperger syndrome or high-functioning autism: Understanding their community and educational strengths and needs in Iowa.* Eau Claire, WI: Lorman Education Services.


Appendix A

Social Story Format

The Social Story format, adapted from Gray, suggests using a combination of seven sentence types with an emphasis on description:

1. Descriptive sentences describe a given situation objectively by defining where the situation occurs, when it will take place, who is involved, what they are doing, and why they are doing it.

2. Perspective sentences state what another individual, usually someone other than the child with autism spectrum disorder, may think or feel.

3. Cooperative sentences can be used to remind adults how they can assist the student to learn a new skill.

4. Directive sentences are sentences that define the response the individual is expected to provide and generally begin with “I will try” or “I will work on” rather than “I will” to allow for some flexibility.

5. Affirmative sentences generally stress the directive in the Social Story.

6. Control sentences are written by the student and help him or her remember the directive.

7. Partial sentences are fill-in-the-blank sentences that require the student to provide the correct response (as cited by Scattone, Tingstrom, and Wilczynski, 2006, p. 221).
Appendix B

Sample Social Story Sentences

<table>
<thead>
<tr>
<th>Sentence Type</th>
<th>Sentence Role</th>
<th>Sample Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive</td>
<td>Is a factual sentence</td>
<td>Children play many different types of games.</td>
</tr>
<tr>
<td>Perspective</td>
<td>Describes a person’s thoughts or feelings</td>
<td>The teacher likes it when we put away the toys.</td>
</tr>
<tr>
<td>Affirmative</td>
<td>Provides reassurance</td>
<td>It’s okay.</td>
</tr>
<tr>
<td>Directive</td>
<td>Suggests possible responses to a situation</td>
<td>I will try to use my words.</td>
</tr>
</tbody>
</table>

as cited by Delano and Snell, 2006, p. 33
Appendix C

Sample Social Stories

My Shower

People like it when I smell good. Many people think showers can be fun and refreshing. Sometimes the water sounds like a slow, calm waterfall. It’s okay to get in and let the water fall on me. I may like the warm water and the smell of soap on my skin. After I clean myself with soap and use shampoo on my hair, I rinse all the soap and shampoo off. I dry myself usually with a towel. The shower makes me clean. Most people take a shower every day. (Gray, 2000, p. 23)

What do I do in a fire drill?

Sometimes at school we have fire drills. They are only practice. Usually, fire drills only last a short time. Usually, there is not a real fire. I have to practice just in case. When I hear the alarm, I quietly get up from my seat when my teacher tells me to. I stand in line with my class and we walk outside with our teacher. When the fire drill is done, I can go back to my classroom. (Gray, 2000, p. 64)

Asking a Question in Class

When I am in class, sometimes I have a question. When I want to ask a question, I try to raise my hand and wait until the teacher calls my name. If I raise my hand, the teacher will know I would like to ask a question. When the teacher calls my name, that means it is my turn to ask my question. The teacher will try to answer my question. I will try to listen carefully to my teacher’s answer. Other children may have questions too. Sometimes my teacher will call another name. I will try to wait patiently and quietly until my teacher calls on me to ask my question. (Gray, 2000, p. 59)