Social Stories:

Improving Responses of Students with Autism

with Accurate Social Information

Carol A. Gray
Jenison Public Schools
8375 20th
Jenison, Michigan 49428
(616) 457-8955

Joy D. Garand
Hamilton County Office of Education
11083 Hamilton Ave.
Cincinnati, Ohio 45231
(513) 742-2200

Abstract

Our understanding of the social challenges facing persons with autism, and resulting approaches to social behavior, are changing. Research in the area of social cognition in children with autism has indicated the social impairment is not global, with some social skills remaining intact while others are severely impaired by the disorder. Successful experiences with an instructional technique based on social stories appear to indicate some students with autism may be more impaired in their ability to access social information than in their ability to understand and respond appropriately to it. The rationale underlying this approach, guidelines for writing and implementing social stories, and case examples are presented.

A student with autism was asked what makes h

teacher laugh. He responded, "Boy, I don't even)   w

that. I guess I'll never know about that." The s(.al

impairment associated with autism is reflected in his

answer, as it is in the many behaviors associated

with this complex disorder. To further understand the

social behavior of persons with autism, research has

focused on social cognition: the cognitive skills

required for social interaction. This area of research

has dismissed some long held beliefs, while piecin.;

together a new understanding of the social and behavioral

challenges facing persons with autism.

Social cognition research appears to explain, in

part, the effectiveness of a new approach to teaching

social behavior which centers around social stories.

Social stories are short stories which describe social

situations in terms of relevant social cues and often

define appropriate responses. For some students with

autism, social stories have been successful in improving

their responses to social situations within a short

period of time. After a brief review of the literature

which provides a rationale and direction for writing

social stories, this approach will be described in detail.

Social Cognition in Autism

Historically, people with autism have been described with terms like "withdrawn" and "in a world of their own". In light of research describing a more complex and specific deficit in the area of social cognition and pragmatics (Baron-Cohen, 1988), these general descriptors become less and less accurate. Though a severe social impairment is characteristic of autism (Kanner,1943), not all persons with autism display withdrawn social behavior (Wing & Gould, 1979). Echolalia, one of the language characteristics of autism (Wing, 1971), has been demonstrated to serve communicative and social functions (Fay, 1969; Prizant & Duchan, 1981; Prizant & Rydell, 1984; Shapiro, 1977; all cited in Wetherby, 1986). It has also been suggested that stereotypic questioning by children with autism may serve to initiate and sustain interactions with others (Hurting, Ensrud, & Tomblin, 1982, cited in Wetherby, 1986). In fact, some behaviors previously described as

inappropriate may now be regarded as having communicative intent (Carr, 1985; Carr & Durand, 1986; Donnellan, Mirenda, Mesaros, & Fessbender, 1984; Iwataq, Dorsety, Slifer, Bauman, & Richman, 1982, Wetherby, 1982; all cited in Wetherby, 1986).

It is important to note "...that autistic children's social development is not impaired in a blanket fashion" (Baron-Cohen, 1988, pg 382). Some social skills are unaffected by the disorder (Langdell, 1978; Baron-Cohen, 1988; Stone & Lemanek, 1990), while others remain significantly impaired. Baron-Cohen (1988) concluded that "almost all" (pg 389) of the pragmatic skills which make language communicative are impaired in children with autism. Dawson and Fernald (1987) demonstrated a relationship between perspective-taking ability (the ability to assume the perspective of another person) and the quality of social behavior and severity of autism. They concluded that while their study should not be taken as determining a causal relationship between perspective-taking ability and social behavior, their results did "suggest a close linkage of these two abilities." (pg. 496). In a study on empathy and cognition which compared

high-functioning children with autism to their normally
developing peers, Yirmiya et.al. (1992) found that while
children with autism demonstrated some of the skills
required to identify the emotions and assume the
perspective of others, their performance was nonetheless
impaired.

The Rationale Behind Social Stories

The rationale behind social stories is based on the
growing understanding of social cognition in autism, and
a belief that this understanding should be reflected in
how social behavior is taught to students with this
disorder. Persons with autism have impairments which
impede their ability to "read" and understand social
situations and formulate appropriate responses.
Experiences with social stories appear to indicate some
students with autism may be more impaired in their access
to accurate social information than in their ability to
understand and respond appropriately to it. The first
approach to a targeted behavior, therefore, should
include an effort to provide a student who has autism
with an accurate understanding of the situation in which

the targeted behavior occurs.

Also, recognizing that students with autism have difficulty with questioning skills, the initial description of a social situation should include answers to unasked, or inadequately asked questions. Children with autism do not appear to understand questions may be used to gain information from others (Huring, Ensrud, & Tomblin, 1982, cited in Baron-Cohen, 1988), consequently their access to information is limited. This increases the responsibility of parents and professionals to include the answers to *who, what, when, where,* and *why* questions when teaching social behavior to students with autism. In addition, teaching students with autism to ask questions should include efforts to help them understand others have information valuable to them.

Finally, the initial presentation of social information to students with autism should use a clear and easily understandable format. Traditional teaching involves interaction between a teacher and student, creating a social situation whenever instruction occurs. Considering social interactions are difficult for students with autism, using traditional instruction to

teach social behavior presents a student with a compounded challenge: understand the lesson, and accurately interpret the social cues used in it's presentation. Social stories seek to minimize potentially confusing instructional interactions to provide students with autism direct access to social information. Once that information is presented, new skills are practiced in the targeted situation with needed, but not excessive, support.

Social Stories: An Overview

Social stories are most likely to benefit students functioning intellectually in the trainable mentally impaired range or higher who possess basic language skills. Social stories have been used successfully with both elementary and secondary students. Modification of a social story can be made in response to a student's ability and individual impairment.

Social stories address a wide variety of purposes. They appear to be particularly helpful in facilitating efforts to include students with autism in general education classes. They have been used successfully to

introduce changes and new routines at home and at school, to explain the reasons for others' behaviors, or to teach new academic and social skills. Several case examples later in this article illustrate a few of the many uses for social stories.

To write an effective social story, it is critical for the author to consider the perspective of the student for whom the story is written. Through careful observation, the author focuses on what a student may see, hear, and feel in the targeted situation. This perspective determines the focus of a social story. For example, a teacher decides to write a social story about standing in line. For a student who is sensitive to touch, the teacher might explain why children occasionally touch one another when standing in line, indicating that this occurs because the children want to start moving, or may need to fix their shirt or scratch their head. For another student who has difficulty following directions to a group, the teacher may revise the story, focusing on listing the rules for standing and walking in a line, and explaining *why* those rules exist. The teacher considers a student's individual

perspective, then writes an *accurate* description of what occurs and why. (The only exception to this are generic stories, described later.)

Guidelines for Writing Social Stories

Beginning with the student's perspective, an author follows basic guidelines to develop a story for a student. These guidelines are intended as a starting point and frame of reference, which may require modification in reference to individual students and situations.

Social stories are written well within a student's comprehension level, using vocabulary and print size appropriate for a student's ability.

Social stories are comprised of three types of short, direct sentences: descriptive, directive, and perspective sentences. Each serves a special purpose in a social story.

Descriptive sentences relate what people do in a given situation, and why. Social stories often begin with these statements to "paint the social backdrop" of the targeted situation. They may describe a setting, an

activity step-by-step, and/or the people involved. It is important for an author to remain objective without assuming the reaction of the observer. For example, "The children play games at recess," instead of "Recess games are fun." From this viewpoint, social stories assist students in focusing on relevant cues. For example:

The bell rings when recess is finished.

The children stand in a line by the door.

They wait for the teacher to come.

Descriptive stories are those containing a majority of descriptive sentences.

Directive sentences are individualized statements of desired responses. Collectively these sentences provide a sequential list of expected responses to the targeted situation. Directive sentences focus on what a student should do to be successful in a given situation. It is important for an author to positively state desired behavior, for example, using "I can walk," instead of "I will not run." The result is similar to a personal task analysis of desired responses. Directive sentences often

begin with "I can..." or they are written as goal
statements, beginning with "I will...". For example:

> I can hear the bell.
>
> I will stop what I am doing.
>
> I will stand in line.
>
> I will wait for my teacher.

Directive social stories are those containing a majority
of directive sentences.

Most social stories contain both descriptive and
directive statements. For example, the previous examples
of descriptive and directive sentences could be
combined:

> The bell rings when recess is finished.
>
> I can hear the bell.
>
> I will stop what I am doing.
>
> The children stand in line by the door.
>
> I will stand in line.
>
> They wait for the teacher to come.
>
> I will wait for my teacher.

The number of descriptive or directive statements in a story is dependent upon the needs of an individual student. The more descriptive a story is the greater opportunity there is for a student to determine his own new responses to a situation. For some students, a totally descriptive story will be confusing, leaving the student at a loss for what to do or what is expected. These students will need directive statements in the story.

Social stories may also contain perspective statements. Perspective statements describe the reactions of others to the situation or the responses depicted in the story. In the previous example, following the directive statement, "I will wait for my teacher," with a perspective statement, "My teacher will be happy to see all the children in line," tells a student how his teacher will respond to the expected behavior. Continuing with the same example, to help a student understand the reactions of others to recess an author could write: "Some children want to keep playing. They might say, 'Oh NO!' when they hear the bell ring."

In most cases, an author should write one concept to a page. This emphasizes each point in a story, and allows for variations (described later) to a basic social story. Stories are often cut apart into separate concepts, with one to four sentences in a section, and mounted on the bottom of black construction paper to draw attention to the written word. To further emphasize each sentence, an author may begin each sentence at the left hand margin of the page.

With only a few exceptions, illustrations are not recommended. Our experience indicates they may be distracting to a student, or a student may make an inaccurate interpretation of the situation based on the illustration. For example, if an illustration depicts a child tying his shoe seated next to a cat on a blue carpet, the student may interpret that to mean shoes should only be tied when seated, next to a cat, on a blue carpet. Photographs have been effective in some stories, particularly when they depict variations of the same situation. For example, in a story describing recess, several photographs of different groups of children involved in a variety of activities may help a student

focus on separate activities, in a situation which is overwhelming as a whole.

Recognizing that children with autism often give highly literal interpretations to statements (Kanner, 1943), an author ensures a story is accurate regardless of the interpretation. For example, using the statement, "I will not talk in the library," in a story could be misleading. What if the student is asked a question? Stating the desired behavior, "I will whisper in the library," or "I can whisper in the library," helps a student understand expectations.

Social stories are written with a built-in flexibility to define events realistically. For example, "When I stand in line, I can see the child in front of me. It may be a boy. It may be a girl. It could be someone different each time." In addition, words like *usually* are often more accurate than *always*. In this way, an author matter-of-factly introduces the possibility of variations.

To provide students with autism with a functional time reference, an author may define the cues that signal the start and finish of a given activity or situation.

This may require using visual cues for students unable to tell time. For example, "I can look at a book until Mrs. Clark finishes writing the first assignment on the chalkboard. Then, I will get out my paper and pencil and start working."

Authors may assist students in making judgements through the use of terms and statements which tie ambiguous concepts to functional cues. For example, "I will wipe the table until it is clean. I will make sure I wipe up all the crumbs and spilled juice."

Titles for social stories may be stated as questions to demonstrate the relationship between questions and answers. For example, a story about substitute teachers may be titled, "Why Do We Have Substitute Teachers?" or may be double-titled, adding, "What Will We Do When I Have a Substitute Teacher?" Subtitles stated as questions may also be used throughout a story.

Finally, writing social stories is an art, not a science. While guidelines are helpful, many effective stories have been written and implemented which deviated from the suggested format. Creativity matched with an

individualized understanding of a student and situation
are among the most valuable ingredients for effective
social stories.

Techniques for Implementing Social Stories

There are several techniques for implementing social
stories. Selection of the most appropriate technique(s)
is dependent upon the abilities and needs of an
individual student. Experience with social stories
indicates they are not effective for all students in all
situations. In cases where social stories are effective,
results are often dramatic and apparent within one
week. In the case examples later in this article,
several different strategies for implementation are
described in detail.

Three basic approaches are used to introduce social
stories to students with autism. First, for a student
who reads independently, an adult introduces the story by
reading it with the student twice. With the adult
sitting slightly back and at the student's side, the
story is read to the student first, followed by the
student reading it back. Once acquainted with the story,

the student reads the story once each day independently.

Second, when introducing a social story to a student who cannot read, the story is first recorded on cassette tape. A bell is used to signal the student to turn the pages. After teaching the student to use the tape recorder and turn the pages on cue, the student "reads" the story no more than once each day.

A student may not be the only person to benefit from reading a social story. A student may share his story with all those depicted in it. This gives the student a central role in the implementation of a story, and may help him understand that everyone knows the same information. Our experience indicates peers may also take an interest in a student's story and will ask to read the story with the student. Consequently, many people critical to a student's success, including peers, share identical information. When a targeted situation occurs, those who have read the story can "cue" the student with a reminder, or quote a key phrase from the story.

A third approach is used with either students who read independently, or with those who need assistance.

Videotaped social stories combine the effectiveness of
video modeling with students with autism (Charlop &
Milstein, 1989; Haring, Kennedy, Adams, Pitts-Conway,
1987) with social stories. These stories are read aloud
onto a videotape, with one page appearing on the screen
at a time. Using this format, sequences depicting the
targeted situation as it occurs may be edited into
appropriate places in the story. Videotaped social
stories make it possible for the story to be read to the
student (volume *on*) or for the student to read the story
himself (volume *off*).

Regardless of how a social story is introduced,
comprehension is checked using different techniques. A
student may complete a checklist, or answer questions in
writing at the end of a story. Also, role playing may be
effective, asking a student to show what he or she will
do the next time the situation occurs.

Our experience indicates that the approach to fading
a student from a social story is highly individualized.
One student may need to read a story only a few times,
with a review of the story about once a month to maintain
new behaviors. Another student may continually need to

read a story prior to the anticipated situation, seeming to retain the information from a story for only a few hours. Still another student may need to read a story once a day for several weeks, suddenly becoming independent of the story when the new behavior becomes habitual. Those implementing a story need to observe a student's reaction on a continuing basis to develop the best fading approach for an individual student and situation.

Social Stories in Practice

Social stories serve a variety of purposes. In this section, case examples illustrate several different uses for social stories, including teaching new routines and rules, academic curriculum, new behaviors, and judgement. In addition, other related activities are described.

Social stories are often used to prepare a student for an anticipated change in routine, or to acquaint a student with an unfamiliar event. These stories provide an opportunity for a student to become familiar with the steps of a routine in a quiet setting removed from the targeted situation. With slight modification, stories teaching routines may be expanded for use in other areas

of instruction, for example, to teach sequencing skills, or how to respond to forgetting.

A routine story was written by a mother for her 9 year old daughter with autism, Liesl. Liesl had difficulty with a new routine involving picking up her brother, Gavin, from school. Liesl would kick the dashboard in the car; become verbally upset over the route her mother would take to the school; become upset seeing the principal touch children in the parking lot as he assisted them into their cars (she wanted him to touch her); strike out at her brother when he entered the van; remove her seat belt; and pinch and scratch her mother as they drove home. Her mother wrote the following story by hand on primary paper, and Liesl read it independently before picking up her brother.

> After I get off the bus, Mom and I pick up Gavin at St. Luke School. When we get there, a lot of kids are in the parking lot. I look for Gavin. Gavin gets in the van and I say "Hi." I sit quietly, keep my hands to myself and keep my seat belt on while Mom drives home. At home, Gavin and I will have a snack. I wonder what today's snack will be!

Liesl demonstrated the appropriate behaviors described in the story the same day the story was introduced. On subsequent days, her mother used verbal cues referring to the story to prompt her daughter. On occasions when Liesl did begin to get upset, her mother asked Liesl to read the story again, and followed up with verbal reminders.

A story describing a routine was written for Max, a 6 year old boy with autism. Max was included in a general education classroom for the majority of his school day, where he had difficulty learning the classroom routines. A goal to teach Max the morning routine was identified. The special education teacher implemented a picture schedule illustrating the routine for Max. The staff also monitored Max as he performed the routine each morning, verbally prompting him when it was needed. These approaches proved unsuccessful.

The morning routine was targeted for a social story. The story defined the steps involved in starting the school day. The story was read to Max one time. Max began performing the morning routine immediately after hearing the story. Max continued to read the story

independently three times each week.   Still, a problem

existed.   Max would take his seat each morning with his

hat still on, and would need to be verbally directed to

take off his hat and hang it up.   The staff could not

understand this, as they remembered the story directed

Max to remove his hat.   In checking the story, however,

it was discovered Max's hat was not mentioned.   A

sentence stating, "Take your hat off and put it in the

locker," was added to the story.   Max read the revised

story, and the problem was immediately corrected.

Checklist stories teach routines and provide

practice with "forgetting" a step.   Each page of the

story describes a step of a daily routine.   Each step of

the routine appears on its own sheet of paper.   At the

end of the story is a checklist listing in sequential

order the steps comprising the routine.   The student

places a check by each completed step on the

checklist.   By removing any selected page of the story,

a step of the routine is eliminated.   The student is

encouraged to recall the missing step as he completes the

checklist.   The student helps the character of the story

by returning the missing step, or page.   This

demonstrates others can provide help when the student

forgets, while introducing a routine in a format he or

she can understand.

Social stories describing a familiar routine may

also be used as a relevant sequencing activity. The

pages of a story are placed in incorrect sequence. A

student is asked to place them in the correct order. To

simplify the task, only a few pages from the story are

chosen at first (for example, the first and last step),

gradually increasing the number of pages and difficulty

of the activity. Adults must be sensitive to instances

where the original order of the steps is not critical to

the desired outcome, accepting a reasonable variation of

a sequence as a correct response. For example, "I will

take off my hat. I will take off my mittens," could

occur in reverse order.

Social stories may incorporate and reinforce

academic skills, or find their way into the classroom

curriculum. For example, the value or impact of a social

story may be expanded by inserting a variety of related

academic pages into the story, without changing the story

line. The result is a curriculum story. Curriculum

stories use social situations from a student's life
experiences as a "backdrop" to demonstrate the functional
application of academic skills, and their relationship to
the student's everyday experiences. Curriculum stories
also keep social stories (which may need to be re-read a
few times to be effective) interesting. With a basic
social story written one step to a page, academic
curriculum pages are easily inserted throughout a story.
Academic curriculum pages address a student's specific
academic objectives, encouraging application of writing,
math, or guessing skills. For example, after a page with
a description and photograph of children in line at
recess, a math insert may ask a student to count the
number of children (or the number of girls, boys, or
smiles) standing in line in the photograph on the
previous page.

Social stories can become part of the general
education curriculum. Many elementary general education
classrooms use Daily Oral Language (D.O.L.) (Vail &
Papenfuss, 1989) as part of the daily curriculum. To
teach D.O.L., a teacher writes a few sentences on the
chalkboard which contain grammatical and punctuation

errors. The students take turns correcting the errors in the sentences. By using sentences based on immediate experiences, a teacher can inform a student with autism, and the entire class, of a change in routine, or reinforce a particular event. For example, the teacher could use sentences like, "Today we have gym at 2:00 instead of at 2:15," or "This morning John walked in the room and said, 'Hi, Mrs. Johnson!'"

Social stories have been effective in teaching some students with autism more appropriate responses to anger and frustration, as described in the following two case examples.

Max, mentioned earlier, was very aggressive toward his sister's new cat. Max was physically abusive toward the cat, throwing and hitting the cat frequently. Efforts to change Max's behavior included describing and modeling more appropriate behavior, but without success. The teacher wrote a story at the family's request, introducing the cat and defining how Max should respond to the cat.

Max's parents read the story to Max the evening they received it from school. The following morning, the cat

came up while Max was eating his breakfast and began

drinking the milk from Max's cereal bowl. Instead of an

aggressive response, Max leaned forward and blew on the

cat. The story was immediately effective. About once a

month Max would need to review the story.

In a second example, Celeste, a seven year old girl

with autism, was demonstrating self-abusive behaviors

including throwing herself on the floor, head banging,

and screaming in response to anger and frustration. The

use of positive reinforcement and other positive behavior

management techniques were tried unsuccessfully.

Celeste's teacher wrote a social story discussing anger,

identifying that anger was acceptable and how it could be

appropriately expressed. The story was read aloud to

Celeste, followed by a few times in a whisper. Finally,

Celeste read the story independently. To check for

comprehension, Celeste was asked to "Show us what you

will do..." when she felt angry. When situations

occurred in the classroom which had previously resulted

in Celeste's self-abusive behaviors, staff would

first verbally cue the story, and if that was not

effective, would retrieve the story for Celeste to

review. The intervention was successful in avoiding the self-abusive and aggressive responses.

One social story was successful in teaching J.B., a high school student with autism, to make an important judgement. J.B. was enrolled in the choir, and a concert was two weeks away. The music teacher indicated J.B. had difficulty controlling his volume when he sang, requiring frequent reminders to bring his volume down. The music teacher expressed concern that J.B. may have difficulty with volume control at the concert, especially considering the new situation and excitement of a large audience.

A story was written by J.B.'s special education teacher which identified ways for J.B. to monitor his own volume. The ambiguous term *volume* was tied to other cues, for example, "I will sing so I can hear the people singing next to me." The first day the story was read, J.B. did not require reminders for volume in class. On subsequent days, reminders were minimal. One morning J.B.'s special education teacher forgot to have J.B. read the story prior to class, and his volume returned to it's original level, with J.B. requiring several reminders.

On subsequent days, J.B. continued reading the story prior to class, and sang successfully with the choir the evening of the concert.

Social stories have also been written in a generic format, describing common situations to students with autism. Generic social stories do not initially include individualized information. Generic stories are often highly descriptive, serving as an "outline" from which stories including individualized directive statements are developed. For example, a generic story outlining the steps for ordering and eating at a McDonalds' could be saved on a computer disc and quickly revised to meet the needs of individual students in a classroom.

Summary

In summary, research in the area of social cognition provides an increasing awareness of the complexities of social development of persons with autism. While some social skills remain intact, others are severely impaired, limiting the access a student with autism has to accurate social information. Social stories are based on the rationale that if a student's ability to gain

information about his environment is impaired, that information should be presented in a format he or she may be able to understand. Making an effort to carefully explain social situations to students with autism is seen as a major part of teaching social behavior, one which is pre-requisite to implementing other approaches or behavioral interventions.

Developing a social story requires sensitivity and an understanding of the basic principles involved in writing them. To write and implement an effective social story, parents and/or professionals should first consider the perspective and abilities of the student with autism. Authors of social stories follow basic guidelines, developing stories using three basic types of sentences: descriptive, directive, and perspective sentences. Implementation of social stories is individualized in response to the abilities of the student for whom the story is written. Stories may be presented as books, with audio tapes, or on videotape, using instructional techniques tailored to an individual student. With minor modifications, Social stories may be used to teach a wide variety of social and academic skills.

Social stories are an art, dependent upon
research to improve efforts to provide students with
autism accurate social information. While excellent
results have been observed through the use of social
stories, to date there is no empirical support data.
At the current time, informal feedback on the use of
social stories is being utilized to improve the art of
writing for students with autism. It is hoped
research and new information will be creatively applied
to further develop and expand this approach in the
future.

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