

**+ Evidence-Based Social Communication Interventions for Children with ASD**

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**+ Evidence Base Decision Making for Intervention Planning**  
 (National Standards Project, 2009)  
 www.nationalautismcenter.org

- Created a scientific merit rating scale based on:
  - Experimental rigor of the research design
  - Quality of the dependent variable
  - Evidence of treatment fidelity
  - Demonstration of participant ascertainment
  - Generalization data collected
- Examined treatment effects
  - Across ages (birth to 21 years)
  - Verbal & Intellectual ability
  - Autism, Asperger's Disorder and PDD-NOS

**SELECTED INTERVENTIONS with varying levels of evidence**  
 (National Standards Project, 2009)

Established (EXAMPLES)	Established (EXAMPLES)	Emerging (EXAMPLES)
Antecedent pkg. (e.g., time delay; priming)	Naturalistic Teaching (e.g., CMT)	AAC
Behavioral pkg. (e.g., FCT)	Modeling (e.g., live, video)	PECS
Pivotal response training	Story-based pkg. (e.g., social stories)	Language training
Joint Attention Training		Sign

**+ Selected Established TXs with Favorable Outcomes (NSP, 2009)**

Treatment	Skills Increased	Behaviors Decreased	Ages
Joint attention intervention	Communication, Interpersonal	NA	0-5
Story-based Intervention Package	Interpersonal, Self-Regulation	NA	6-14
Naturalistic teaching strategies	Communication, interpersonal, learning readiness, play	NA	0-9

**+ Selected Established TXs with Favorable Outcomes (NSP, 2009)**

Treatment	Skills Increased	Behaviors Decreased	Ages
Pivotal Response Training	Communication, interpersonal, play	NA	3-9
Modeling	Communication, cognition, play, interpersonal, personal responsibility	Problem behaviors, Sensory/emotion regulation	3-18
Comprehensive behavioral treatment of young children (e.g., DTT)	Communication, interpersonal, play, higher cognitive functions, motor, personal responsibility	Problem behaviors, general autism symptoms	0-8

**+ Joint Attention Training**

**Goal: To establish joint attention (JA):**

- Coordinate visual attention with another to an external object/activity demonstrating mutual interest and social engagement (Carpenter & Tomasello, 2000; Mundy & Stella, 2000)
- Pivotal skill for language (Bakeman & Adamson, 1984; Bono et al., 2004; Baron-Cohen, 1987; Bates, 1979; Carpenter et al., 1998; Charman et al., 2003; Dawson et al., 2004; Loveland & Landry, 1986; Mundy & Crowson, 1997)
- Predictor of language development in autism (Mundy et al., 1990)

**+ What Do Early Deficits in Joint Attention Look Like?**

- Less pointing and showing
- Difficulty following a 'line of regard'
  - ⇒ understand direction of another's gaze
- Challenges in referential looking
  - ⇒ look back and forth between a person and an interesting object/event

**+ What Do Early Deficits in Joint Attention Look Like?**

- Responding to joint attention
  - ⇒ follow adult's attentional focus
- Initiating joint attention
  - ⇒ direct an adult's attention to a child's focus (Yoder & McDuffie, 2006)

NOTE: JA is=>Often not found in 2 year olds with ASD (Clifford & Dissanayake, 2008)

**+ Joint Attention Training: Evidence for Children with ASD**

Verbal & physical prompts; task choice; contingent Rf; and, interspersal of mastered tasks used to facilitate JA in natural contexts

**Results:**

- Four-year-olds with ASD made gains with limited maintenance
- Need to increase parent involvement and assess external motivation

*(Kasari et al., 2001; Whalen & Shreibman, 2003)*

**+ Joint Attention Training: Evidence for Children with ASD**

- Parents taught to use Discrete Trial Training (DTT) and Pivotal Response Training (PRT) to get child's attention before instruction, use child choice and motivating toys
- Parents received didactic training, modeling, and coaching to initiate JA, prompt a response and respond contingently


Treatment ⇒ 3 Tx/wk; 75 min.

*(Rocha et al., 2007)*

**+ Joint Attention Training: Evidence for Children with ASD**

**Five phases:**

- Handing
- Tapping
- Showing object
- Following point
- Following another's gaze



**Results:**


- Children with ASD (2-4 yrs.) increased positive responses (esp. to obj.); parents increased initiations during Tx, although not maintained. *(Rocha et al., 2007)*

**+ Joint Attention Training: Evidence for Children with ASD**

- Facilitated parent child interaction 60 min/day with 3 children (22-33 mos.)

**Four Phases:**

- Focusing on faces
- Turn-taking
- Responding to JA
- Initiating JA



**Results:**

- Steady growth across contexts; maintained 5 wks. post Tx

*(Schertz & Odom, 2007)*

**Joint Attention Training: Evidence for Children with ASD**

Researcher(s)	Type of Study Design
Aldred et al. (2004)	RCT pre-post group comparison
Gulsrud et al. (2007)	RCT group comparison
Jones et al. (2006)	SS multiple baseline design
Kasari et al. (2006)	RCT group comparison
Kasari et al. (2008)	RCT follow-up to 2006 study
Whalen et al. (2006)	SS multiple baseline across participants

**Parents as Interventionists**

Parents of children with ASD:

- Support communication and increased responsiveness (Delaney & Kaiser, 2001)
- Deliver effective intervention targeting language and communication (Moes & Frea, 2002)
- Use synchronous play to increase language and communication (Siller & Sigman, 2002)
- Use responsive interactions to enhance social-emotional functioning (Mahoney & Perales, 2003)
- Respond sensitively and interpret actions as meaningful (Aldred et al., 2004)

**More Than Words (MTW)**

- Hanen Program ([www.hanen.org](http://www.hanen.org)) family-based intervention for young children with ASD (Sussman, 1999)
- Parents learn that communication depends on:
  - Being able to pay attention
  - Finding enjoyment in two-way communication
  - Imitating and understanding what others say and do
  - Interacting and having fun doing it
  - Practicing what you learn
  - Having structure, predictability, and repetition

**More Than Words (MTW)**

**Goal:** To increase interaction and vocabulary.


Objectives depend on child's communication stage (i.e., own agenda, requester, early communicator, partner)

- Establish new ways of communicating
- Teach new reasons for communicating
- Facilitate a connection between what is being said and what is happening

(Sussman, 1999)

**Facilitative Strategies for MTW**

**Owling** ⇨ face to face



- **Observe** ⇨ see child's interests, how and why child communicates and how child responds
- **Wait** ⇨ give child time to share his/her message and think about your message
- **Listen** ⇨ learn what child does with sounds, words or sentences and build on these

(Sussman, 1999)

**Facilitative Strategies for MTW**

- Following child's lead ⇨ 4 "I's"
  - **Include child's interests** ⇨ notice what child is doing and join in; include what child looks at in play space
  - **Interpret** ⇨ assume intention; provide physical and verbal models
  - **Imitate** ⇨ copy child's actions and sounds
  - **Intrude** ⇨ join in even if child doesn't initially welcome you (e.g., keeping things child wants, hiding and searching, getting in the way, joining play)

(Sussman, 1999)

+ **Facilitative Strategies for MTW**  
**R.O.C.K. in your routine!**


- **R** ⇒ repeat what you say and do when you...
  - Start, play, and end a game
  - Play people games often and with different people
- **O** ⇒ offer opportunities for child to take turns
  - Plan when you will offer turns
  - Plan the turns the child takes
  - Offer new turns as child progresses

*(Sussman, 1999)*

+ **Facilitative Strategies for MTW**

- **C** ⇒ cue child to take a turn
  - Provide explicit cues to facilitate a turn
  - Give natural cues (e.g., wait, lean forward, look expectantly)
- **K** ⇒ keep it fun and keep in going
  - Be lively and animated
  - Make it last!


*(Sussman, 1999)*



+ **Facilitative Strategies for MTW**

■ **4 "S's"**

- **S**ay less
- **G**o slow
- **S**tress
- **S**how



*(Sussman, 1999)*

+ **More Than Words: Evidence for Children with ASD**

**Purpose:**  
 To facilitate understanding of ASD and the social communication of the child

**Participants:**  
 Forty-nine Mothers; 2 Fathers; 51 children with ASD

**Results:**  
 Found positive results in parents' use of facilitative strategies and in children's vocabulary size

*(McConachie et al., 2005)*

+ **More Than Words: Evidence for Children with ASD**

**Purpose:**  
 To examine children's social interaction following mothers' participation in MTW

**Participants:**  
 Three families of children with ASD (2.8-3.2 years)

**Results:**  
 Parents increased use of responsive interaction strategies; children increased vocabulary (*Girolametto et al., 2007*)

**NEW STUDY:** Carter et al. RCT examining MTW with positive effects for communication

+ **Milieu Communication Teaching (MCT)**

■ **PURPOSE:** To facilitate early communication and language development (*Gilbert, 2008*)

■ **INCLUDES:**

- Prelinguistic Milieu Teaching
- Enhanced Milieu Teaching



■ **STRATEGIES:**

- Task analysis
- Predictable structure
- Attention to antecedent & consequent event

**+ Milieu Communication Training (MCT)**

- **CONSIDERS:**
  - Generalizes communication acts beyond training setting
  - Paves the way for using natural environment
  - Fosters spontaneous communication acts
- **ULTIMATE GOAL:**
  - Shape communicative behavior to develop functional language


(Gilbert, 2008; Yoder & Stone, 2006; Yoder & Warren, 2001)

**+ Strategies to Support MCT**

- Place objects of interest in sight but out of reach
- Use expectant waiting (time delay) focusing on objects of interest
- Withhold interesting materials
- Give inadequate materials/portions
- Sabotage routines or violate expectations
- Protest actions
- Create unexpected situations
- Model, reinforce naturally, and imitate contingently

**+ Prelinguistic Milieu Teaching: Evidence for Children with ASD**

■ **Parent-delivered PMT techniques lead to positive communication outcomes for 5 preschoolers with ASD**




*(Kashinath et al., 2006)*

**+ Prelinguistic Milieu Teaching: Evidence for Children with ASD**

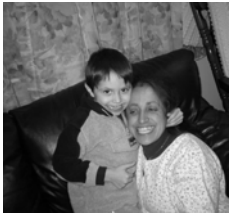
➤ **Comparison of PMT and PECS with 36 preschoolers with ASD revealed:**

- PMT led to generalized turn-taking and JA
- PECS led to generalized requests for preschoolers with little JA



*(Yoder & Stone, 2006)*

**+ Prelinguistic Milieu Teaching: Evidence for Young Children**




■ **Parent delivered social-pragmatic Tx on communication & symbolic abilities of 16, 2-4 year olds with ASD suggested improvements, but results not significant**

*(Keen et al., 2007)*

**+ Enhanced Milieu Teaching: Evidence for Young Children**

➤ **Parents who have been taught to use EMT are able to facilitate their children's:**

- Spontaneous communication
- Utterance length
- Number & diversity of words spoke



**NOTE:** Children with ASD generalized their learning to the home setting  
(Hancock & Kaiser, 2002; Hancock et al., 2000, Hemmeter & Kaiser, 1994)

+ **Picture Exchange Communication System (PECS)**

**Goal: To teach functional communication**

- Teach within a social context (e.g., requesting) using inherent rewards (e.g., getting requested items) (Bondy & Frost, 1994; 2001)
- Circumvents problems with traditional language intervention (e.g., required prerequisite skills) (Bondy, 2001; Bondy & Frost, 1994, 1998, 2001; Frost & Bondy, 1994)
- Grounded in sound principles (e.g., effective Rfers, spontaneous communication, accessible training) (Bondy & Frost, 1998)

+ **SIX PHASES of PECS**

**Phase I: Teaching the Physically Assisted Exchange**

**Goal: Child sees preferred item, picks up picture of item, reaches toward communication partner and releases picture**

**Phase II: Expanding Spontaneity**

**Goal: Child goes to PECs board, pulls off picture, goes to adult and releases picture**

+ **SIX PHASES of PECS**

**Phase III: Simultaneous Discrimination of Pictures**

**Goal: Child requests item by going to PECS board, picks desired picture, returns to communication partner to give the picture**

**Phase IV: Building Sentence Structure**

**Goal: Child requests present and non-present items using "I want..."; selects phrase and picture symbols, puts on sentence strip, and gives to communication partner**

+ **SIX PHASES of PECS**


**Phase V: Responding to "What do you want?"**

**Goal: Child spontaneously requests in response to "What do you want?"**

**Phase VI: Commenting in Response to Questions**

**Goal: Child answers other questions (e.g., What do you want? What do you see? What do you have?)**


+ **PECS: Evidence for Children with ASD**



**Results:**

- 2 young children used speech and PECS after 4 months treatment (Bondy & Frost, 1994)
- 76% of children developed speech, or speech and picture-based system (Bondy & Frost, 1994)
- 16 preschoolers with ASD communicated using PECs with various partners within 3-28 months (Schwartz et al., 1998)
- 19/20 children used PECs to request, 9 had increased verbalizations (Liddle, 2001)
- Increase in frequency of spontaneous language and duration of social interaction with peers (Kravitz et al., 2002)

+ **PECS: Evidence for Children with ASD**



**Results:**


- 3 children with ASD increased words and grammatical complexity (Ganz & Simpson, 2004)
- 2 students increased independent requests with PECs and increased vocalizations with signs (Tincani, 2004)
- 2 students trained to use descriptors and able to do so without pictures available (Marckel et al., 2006)
- 41 children had increased spontaneous initiations with teachers in first 15 hrs. of PECS training (Carr & Felce, 2007)
- Deaf child with autism had increased functional communication following PECS training; maintained at 4-month follow-up (Malandraki & Okalidou, 2007)

+ **Pivotal Response Training (PRT)**  
(Established TX, NSP, 2009)

- Pivotal behaviors . . .
  - Central to wide areas of functioning
  - When taught, result in widespread positive effects across many other behaviors.

*Two intrinsic components:*

- emphasizes natural and functional language use
- incorporates teaching techniques that motivate children to use language to communicate




+ **Critical Component of PRT: Natural Reinforcers & Choice** (Koegel & Williams, 1980; Williams et al. 1981)

- Natural and intrinsically reinforcing consequences > motivation & speed of acquisition; child associates positive outcome with target behavior
- **EXAMPLE:** Opening the lid of a container to obtain a reward inside vs. an empty container
- Use of child-preferred materials, topics and toys > motivation
- Follow child's lead => leads to longer periods of conversation

+ **Critical Component of PRT: Task Variation** (Dunlap & Koegel, 1980)

- Include multiple exemplars of a concept to be taught and vary the tasks in which the targeted behavior is expected




+ **Critical Component of PRT: Interspersing Maintenance Trials** (Dunlap, 1984)

- Interspersing previously learned tasks with new tasks (or acquisition trials) => *improves correct responding & positive motivation*
- Momentum is for behavior to persist following a change in context (e.g., preceding a difficult task with a series of short & easy tasks)

+ **Critical Component of PRT: Reinforcing Communicative Attempts** (Koegel et al., 1988)

- Reinforcing clear attempts to communicate =>
  - > motivation to respond during interactions



+ **Use of PRT with Families** (Baker et al., 1991; Koegel et al., 2009; Moes, 1995)


- Parents teaching individual targets: > increased stress; lower happiness & interest ratings during interactions

VS.

- Parents focused on pivotal targets: < stress; higher happiness & interest ratings during interactions

+ Pivotal Response Training: Primary Targets

- Motivation
- Responsivity to multiple cues
- Self initiation
- Empathy
- Self regulation
- Social interaction



+ Pivotal Response Treatment

**COMPONENTS:**

Provide ?, instruction or opportunity for child to respond using language appropriate to task

**EXAMPLE:** *If it is time to get ready to go home on the bus, a teacher might go to a child, get his attention by tapping him on the shoulder and saying his name and then simply stating, "Tommy, get your coat."*

+ Pivotal Response Treatment

**COMPONENTS:**

Provide clear & uninterrupted maintenance tasks (already able to perform) with novel tasks (to be learned)

**EXAMPLE:** *If a child knows all his colors & loves matchbox cars, you might rotate asking what color a car is (what he knows) with what kind of car it is (new information he is learning). You allow the child to play with the car for which he identified the correct color. If he doesn't know the type of car, however, the correct answer is modeled, he is prompted to respond & once he repeats the name he is rewarded with being able to play with the car.*

+ Pivotal Response Treatment

**COMPONENTS:**

Provide choice or shared control in selecting tasks (e.g., books to read at bedtime, ?'s asked)

Structure environment so child responds to multiple cues (e.g., red ball is different than red box; yellow balloon different than red balloon)

+ Pivotal Response Treatment

**COMPONENTS:**

RF behavior immediately with natural consequences (e.g., respond to "Who wants juice?" & is given juice) & respond to all attempts (e.g., looking at a book, px with a frog jumping from one lily pad to another; say "What is the frog doing?" Child points to frog & says "green frog;" "Yes, it is a green frog. What's the frog doing? Is he jumping?" Child says, "jumping" & you follow with, "Yes, he is jumping. What is he doing?" while pointing to another frog jumping).

+ Effectiveness

Successfully used to > social interaction in toy play between typical peers & children with ASD (Koegel & Koegel, 2001)


Improvement in sound production for 5 children with ASD using motivators in the natural environment w/out generalization (Koegel et al., 1998)

Peer mediated PRT lead to > initiations & joint attention for 2 children with ASD (Pierce & Schreibman, 1995; 1997)

Improved symbolic play skills in 7 children with ASD (Stahmer, 2001)

Successfully taught self-initiations to children with ASD (Koegel et al., 1999)

## Video & Video Self Modeling, Social Stories & Comic Strip Conversations



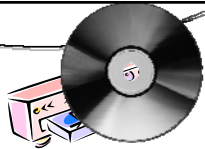
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## Modeling (Established TX, NSP, 2009)

**Observational learning. . . Supports emotional reactions & sharing abilities in children with disabilities using typical peer models**

- **Used to facilitate attention**
- **Creates mental representation of desired behavior**
- **Requires attending to actions being modeled**

## Video Modeling




**Watching a video of adults or children modeling particular target behaviors (e.g., conversational scripts, self help skills, greeting, labeling, etc.)** (Ayres & Langone, 2005, Charlop & Milstein, 1989; Charlop-Christy et al., 2000; Charlop-Christy & Daneshvar, 2003; Sherer et al., 2001)

**Helps focus child's attention on relevant stimuli in the video; practice, rehearsal & repetitive viewings lead to retention & demonstration of targeted language &/or behavior** (Banda et al., 2007; Buggey, 2005)

## Video Modeling

**Fosters an ability to take what is learned through video viewing & generalize information to daily life** (Shipley-Benamou et al., 2002)



## Video Modeling

**Considerations** (Charlop-Christy & Kelso, 1997; Charlop & Milstein, 1989)

- Use motivating theme for conversation/play being modeled
- Locate camera strategically to show facial expressions &/or hands carrying out a particular task
- Pause video to highlight expressions
- Prompt child's attention (e.g., "Watch the TV" or "Look")
- Following viewing, ask child what they watched
- Debrief what was heard, noting prosody & emotional expression
- Talk about variations to increase flexibility
- Encourage & RF attempts at modeled behavior
- Rewind to important parts

## Video Modeling

**STEPS** (Charlop-Christy, 2004)

- **Select & define behavior to be developed (e.g., greeting peers)**
- **Complete task analysis (e.g., how to teach greeting)**
- **Observe target behavior in typical children (e.g., greeting on playground or in the hallways of the school building)**
- **Present steps slowly; have actors exaggerate steps while looking into camera; although can do in real time**
- **Need to demonstrate behavior @75-80% for acquisition**
- **Provide @ least 2 viewings of video**
- **Create short scripts (e.g., 3 lines each for child with ASD & communication partner)**
- **Gather input from team to guide video development**

## Video Modeling

Implementing video modeling (Banda et al., 2007)

- Identify & select target behaviors
- Obtain permission – teachers & parents
- Interview parents & observe child re: interest in videos & watching TV
- Select & train models to demonstrated target behavior
- Prepare equipment & setting

## Video Modeling

Implementing video modeling (Banda et al., 2007)

- Record (eliminate unnecessary distractions)
- Edit for normal pace
- Collect baseline data (at least 3-4 sessions/days)
- Show video clip & ask child to demonstrate desired behavior
- Reward success
- Collect & graph intervention data
- Promote generalization & maintenance

## Video Self Modeling (Buggey, 2010)

- Viewing self positively performing a skill or task slightly beyond present ability
- Two Forms: (Dowrick, 1977)
  - Positive self review=>Rfing already known skills
  - Feedforward=>Viewing skills not yet learned

POSSIBLE Prerequisites:

- Self-recognition
- Attention to video

## Components of a VSM Movie

- Positively label behavior: “Here’s Tony talking nicely with his friends”
- Follow this with cheering/clapping
- Only needs to be 2-3 minutes long)
- Show child performing well
- Reinforce at the end, re-labeling behavior. “Nice playing, Tony!”

<http://www.siskin.org/www/docs/208/vsm-videos/vsm-videos-buggey.html>

## Guidelines for Effective Video Instructions Shukla-Mehta et al., 2010)

- Use of instructional prompts & Rfers promotes skill acquisition, maintenance, & generalization
- Evaluate student’s attending, imitation, visual processing & comprehension, matching to sample & spatial ability skills to help determine content & length of video
- Those who attend to a video for at least 1 min suggests better results than those distracted by irrelevant features
- Keep video clip from 3-5 minutes to sustain participants’ attention
- Model type does not affect student learning

## Effectiveness

**Supports skill development in child with a variety of disabilities** (Dowrick & Dove, 1980; Dowrick & Hood, 1981; Dowrick & Raeburn, 1995) **& children with ASD** (Charlop & Milstein, 1989; Charlop-Christy & Daneshvar, 2003; Charlop-Christy et al., 2000; LeBlanc et al., 2003)

**3 children with ASD**  
Viewed 2 familiar adults talking about toys of interest  
>question asking & conversation maintenance

**Effectiveness**

5 children with ASD, 7-11 years  
 Compared live vs. video modeling to teach greetings; conversational speech; independent, cooperative & social play; oral comprehension following story reading; labeling emotions; & self-help skills  
**Video modeling led to faster skill acquisition & > generalization**  
**Time & cost of live modeling > that of video modeling**  
 (Charlop-Christy et al., 2000)

**Effectiveness**

Compared 'self' vs. 'other' modeling to teach responses to ?'s and asking ?'s in conversation with adults & peers; **both equally effective** (Sherer et al., 2001)

Watching self, familiar adult or familiar peer=>little difference among 5 students (11-13 yrs.), although individual preferences (Mechling & Moser, 2010)

3 boys with ASD, 6-9 years; taught 1st order false belief tasks; >perspective taking with generalization  
 (Charlop-Christy & Daneshvar, 2003)

**Effectiveness**

3 boys with ASD, 7-13 years  
 > perspective taking following video modeling + RF  
 (LeBlanc et al., 2003)

3 children with ASD, 5-11 years  
 Learned verbal comments, facial expressions, gestures & intonation in play following 3-4 video viewings  
 (Charlop-Christy et al., 2004)

**Effectiveness**

Facilitated verbal responses during play, (three 7-12 year olds), w/ minimal maintenance (Buggey et al., 1999) & spontaneous verbal requests (four 3-6- yr. olds)

3 preschoolers with ASD > affective responding (i.e., sympathy, appreciation & disapproval) in the home & play contexts using both in vivo & video modeling with RF & prompting (Gena et al., 2005)

**Effectiveness**

Review of video modeling revealed it is a promising practice to support social communication & functional skills (Ayres & Langone, 2005; Bellini & Akullain, 2007)

Adolescent & 2 young adults taught to entertain customers & promote products in a retail setting using VM; all learned to use skills & generalized skills to a job opportunity (Allen et al., 2010)

**Social Stories - What are they?**

- Describe challenging social situations
- Tune students into relevant social cues
- Provide accurate & specific information about what occurs in a social situation & why

Short sentences (*dependent on developmental & language level*) that may include printed words alone or words paired with pxs  
 (Cullain, 2000; Gray & Garand, 1993; Lorimer et al., 2002; Smith, 2001; Swaggart et al., 1995; Thiemann & Goldstein, 2001)

## Social Stories - guidelines

(Gray, 1995)

**Start with detailed comprehensive information:**

- Where is the situation occurring?
- Who are the players?
- How long?
- How it starts and ends?
- What happens, why?

## Social Stories - guidelines

- **Gather information through interviews**
  - Those working with student
  - Those familiar with situation
- **Observe the situation**
  - Identify alterations
  - Determine motivators
  - Record information as objectively as possible
  - Record things that might change

## Social Stories - guidelines

- **Assume student's perspective**
  - Will > understanding of student's feelings
  - Ask ?'s about relevant cues & responses to cues  
(e.g., *What would your teacher say? What do your classmates do when the teacher . . . ?*)

## Social Stories - guidelines

- Avoid 'always' & use 'usually' or 'sometimes'
- Consider child's reading & comprehension level
- Use photos, illustrations, drawings, digital media (More, 2008)
- Read SS or have child read them or use computer program

## Social Stories

**Sentences Types** (Gray, 1995a)

***Descriptive***=>provides information about the setting, people, or activities (e.g., *"Usually I go to gym class on Tuesdays and Thursdays with my third grade class."*)

***Perspective***=>describes child's possible feelings or responses (e.g., *"I get mad when I have to wait my turn."*)

## Social Stories

**Sentences Types** (Gray, 1995a)

***Directive***=>informs children of what they need to do in a given setting (e.g., *"When I go to gym class, I listen to what my teacher tells the class to do."*)

***Affirmative***=>gives child sense of what others may be thinking or feeling (e.g., *"My teacher likes it when I listen to what he says."*)

### Social Stories

**Sentences Types** (Gray, 1995a)

*Cooperative=>describes how others will be able to help the child (e.g., "My teacher can help me when I don't understand what I am suppose to do.")*

*Control=>identifies strategies the child might use to recall information in a social story (e.g., "When I listen to my teacher's instructions, I will draw a picture in my head of what the teacher is telling us to do.")*


### Considerations

- 0-1 directive for every 2-5 descriptive/ perspective/control sentences
- Use situations from a child's actual experience
- Descriptive & perspective sentences give students opportunities to develop appropriate responses
- Behaviors to be addressed are defined through directive statements

### Social Story Effectiveness

Used to teach social (e.g., greeting) & behavioral (<aggression) skills in children with ASD

< inappropriate social behaviors in children with ASD @ home & school (Cullain, 2000; Kuoch & Mirenda, 2004; Kuttler et al., 1998; Norris & Dattilo, 1999; Romano, 2002; Smith, 2001; Swaggart, et al., 1995)



### Social Story Effectiveness

<inappropriate behavior in the classroom for 8 year old with ASD without an >in appropriate behavior in lunchroom (Norris & Dattilo,1999)

>appropriate greetings & sharing & < aggression for 3 children with ASD, 7-11 years (Swaggart et al., 1995)




### Social Story Effectiveness

<behaviors preceding a tantrum & > desired behavior for 12 year old with ASD (Kuttler et al., 1998)

Practitioners learned to develop & use social stories & rate effectiveness with greatest success when social stories were read frequently (Smith, 2001)

Video feedback + social stories > social skills in 5 children with ASD, 6-12 years, with some generalization for 1 student (Thiemann & Goldstein, 2001)




### Social Story Effectiveness

< in problem behaviors for 3 boys with ASD, 3-6 years (Kuoch & Mirenda, 2003)

2 children with ASD, 7-8 years, taught to make choices & play appropriately (Barry & Burlew, 2004)

< frustration behaviors & >oral communication to express needs @ homework time for child with Asperger Syndrome (Adams et al., 2004)




### Social Story Effectiveness

- >participation in novel activities for 3 children with ASD (Ivey et al., 2004)
- >communication & perspective taking for children (4-11 yrs.) with ASD using social stories (Hutchins & Prelock, 2006)

**NOTE:** Effects of SS are variable; inadequate participant description & influence of multiple Txs (Reynhout & Carter, 2006)


**Need studies with more rigorous designs** (Sansosti et al., 2004)



### Comic Strip Conversations

(Gray 1994; 1998)


- Simple drawings to illustrate an ongoing conversation
  - Uses visual supports
  - Helps students with fast-paced two-way communication
  - Use of talking & thought bubbles



### Comic Strip Conversations


*What are they?*

- Identify what person says or does
- Identify what people may be thinking
- Use visuals to problem solve
- Provide insights into perspective taking




### What do you do?

- Help student understanding that it's okay to draw while talking
- Student leads conversation
  - Access to drawing material
  - Student does majority of drawing, writing, talking
  - Starts as an interview & moves to conversation



### Process for Drawing

- Use location symbol
- Focus on a specific challenging situation
- Gather information
- Share perspective of the adult
- Follow a sequence or structure
- Summarize the conversation
- Conclude the conversation with solutions



### CSC-A Positive Behavior Support Strategy

(Glaeser et al., 2003)

- Implemented by teachers for a 2nd grade child with ASD
- 3 steps
  - Introduced & modeled use of the strategy for all types of interactions
  - Reviewed CSC book & symbols used to explain feelings & thoughts
  - Reinforced use at least once daily & at home
- **RESULTS**=>Reduced playground and classroom problem behaviors

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