

# Social Skills Training

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Pennsylvania Training and Technical Assistance Network

## PaTTAN's Mission

The mission of the Pennsylvania Training and Technical Assistance Network (PaTTAN) is to support the efforts and initiatives of the Bureau of Special Education, and to build the capacity of local educational agencies to serve students who receive special education services.

## PDE's Commitment to Least Restrictive Environment (LRE)

Our goal for each child is to ensure Individualized Education Program (IEP) teams begin with the general education setting with the use of Supplementary Aids and Services before considering a more restrictive environment.

## Applied Behavior Analysis

“The science in which tactics derived from the principles of behavior are applied systematically to improve socially significant behavior and experimentation is used to identify the variables responsible for behavior change”

- Cooper, Heron, & Heward 2007

## Presentation Agenda

Why-is this topic so relevant?

Who-is social skills training appropriate for?

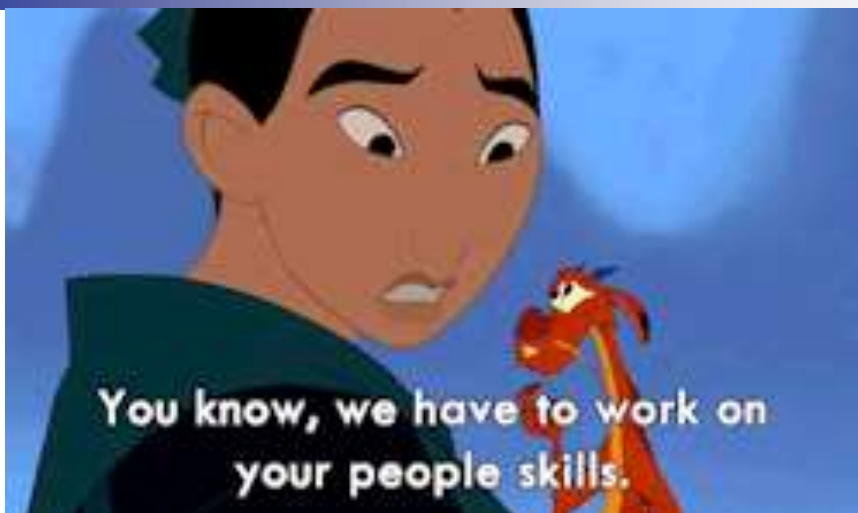
What-type of instruction should be used with each level learner?

Where-should the social skills instruction be run?

When-during the school day should this type of instruction be taught?

How-is this going to be taught??

\*\*Goal-less questions more answers!



## Why is this topic so important?

- Autism Spectrum Disorder as in DMS-V (American Psychological Association, 2013)
- Persistent deficits in social communication and social interaction (as evidenced by)
  - Deficits in social/emotional reciprocity (eye contact, back & forth conversation, emotions, failure to initiate or respond to social situations).
  - Deficits in developing, maintaining, and understanding relationships

## Why is this topic so important?

- Research supports that a student's social incompetence relates to increased negative outcomes in the future (Walker, Ramsey, & Gresham, 2004)
- Let's review social behavior from 2-12 months of age(<http://www.cdc.gov/ncbddd/actearly/milestones/index.html>):
  - Smiles at people
  - Starts to babble with expression
  - Responds to other people's emotions
  - Copies sounds and gestures of others
  - Attempts to get attention of others both vocally and non-vocally

## Why is this topic so important?

Early on children with autism without specific instruction/interventions-

- Do not look at others or engage them in activities
- They engage in repetitive behaviors that have little functionality
- They fail to engage in joint attention
- They do not watch others during play or imitate their peers
- Difficult time taking turns or waiting in social situations
- Without training may not mand for items or activities and do not respond to others mand directed to them (share a toy)

(Vince Carbone)

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## Who? What? Where? When?

- Start instruction early, but its never too late!
- Include peers in the AS classroom and inclusion setting
- Teach in multiple settings for generalization
- Throughout the day in scheduled sessions and naturally occurring situations

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## Where to begin?

Effective *interventions* for social skills are often the same as for other behaviors

- Pairing, Shaping, Prompting, Prompt Fading, Differential Reinforcement, Errorless Learning, Task Analysis, Chaining, Mand Training, Discrete Trial Training, Natural Environment Training, Fluency Based Instruction / Precision Teaching

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## Where to begin?

### Assessment

- Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP: Sundberg)
- Early Start Denver Model Curriculum Checklist for Young Children with Autism (Rogers and Dawson)
- Social Skills Solutions: A Hands on Manual (McKinnon and Krempa)
- Skills Streaming (McGinnis)

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## What is language?

- Language is social interaction. Communication is social behavior.
- When teaching learners with limited language skills expanding the foundational language skills is critical to prevent rote language
- Remember that learners need a strong foundation in order to be able to develop more advanced social skills.
- Let's take a quick look at the verbal operants to figure out next steps...

## Verbal Operants

Verbal Operant	Antecedent	Behavior	Consequence
Mand	Motivative Operation (wants cookie)	Verbal behavior (says "cookie")	Direct reinforcement (gets cookie)
Tact	Sensory Stimuli (sees or smells cookie)	Verbal behavior (says "cookie")	Non-specific reinforcement (gets praised, for instance)
Intraverbal	Verbal stimulus (someone says: "What do you eat?")	Verbal behavior (says "cookie")	Non-specific reinforcement (gets praised, for instance)
Echoic	Verbal Stimulus (someone says "cookie")	Verbal behavior: repeats all or part of antecedent (says "cookie")	Non-specific reinforcement (gets praised, for instance)

## Other Relevant Operants

Operant	Antecedent	Behavior	Consequence
Receptive (Listener Responding)	Verbal stimulus (someone says "touch cookie")* <small>*in this case the cookie must also be present: all receptive discriminations involve 2 S<sup>o</sup>s</small>	Non-verbal behavior (child touches cookie)	Non-specific reinforcement (gets praised, for instance)
Imitation Point to point correspondence <u>a.k.a. Mimetic</u>	Non-verbal behavior (person performs an action, etc.)	Non-verbal behavior with point to point correspondence (person imitates same action)	Non-specific reinforcement (example: praise; 'you're right!', "great job!" high five, pat on back, etc.)
Match to sample	Non-verbal behavior (presentation of stimuli)	Non-verbal behavior (in presence of one stimuli, a second stimuli is selected with shared properties).	Non-specific reinforcement (example: praise; 'you're right!', "great job!" high five, pat on back, etc.)

## Assessment: VB-MAPP - Social Skills Milestones

- 0-18 months:
  - Makes eye contact as a mand 5 times
  - Indicates they want to be held or physically played with 2 times
  - Spontaneously makes eye contact with other children 5 times
  - Spontaneously engages in parallel play near other children for 2 minutes
  - Spontaneously follows peers or imitates their motor behavior 2 times



## Assessment: VB-MAPP - Social Skills Milestones

- 18-30 months:
  - Initiates a physical interaction with a peer 2 times
  - Spontaneously mands to peers 5 times
  - Engages in sustained social play with peers for 3 minutes without adult prompts or reinforcement
  - Spontaneously responds to the mands from peers 5 times
  - Spontaneously mands to peers to participate in games, social play, etc. 2 times

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## Sustained social play video

<https://www.youtube.com/watch?v=86SKMuMayhk>

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## Assessment: VB-MAPP - Social Skills Milestones

- 30-48 months:
  - Spontaneously cooperates with a peer to accomplish a specific outcome 5 times
  - Spontaneously mands to peers with a WH questions 5 times
  - Intraverbally responds to 5 different questions or statements from peers
  - Engages in pretend social play activities with peers for 5 minutes without adult prompts
  - Engages in 4 verbal exchanges on 1 topic with peers for 5 topics

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## THE BIG QUESTIONS

When should we program and set goals for:

- Eye contact?
- Turn taking?
- Answering questions from a peer?
- Playing a game?
- Greetings?

Before answering these questions let's review a few other key factors...

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## Key Factor: Motivation – Why is it so important?

- Environmental variable (**always in the environment!!!**) that: a) alters the effectiveness (value) of some stimulus (reinforcer) and, b) alters the frequency of all behavior reinforced by that stimulus (reinforcer)
- In other words – it is an antecedent that will alter the value of reinforcers and evokes behavior
- Factors that alter MO – Deprivation/Satiation
- Critical component in mand training, social skills training, and natural environment training

## Key Factor: Motivation – Why is it so important?

- Motivation plays a role in altering the value of something and effects the frequency of a previously reinforced behavior
  - Reinforcement → consequence that occurs immediately after a behavior and therefore increases the future probability of that behavior occurring again in the future
- If motivation for social interaction is not established it is less likely to occur!

## Types of Conditioned Motivating Operations (CMO)

- Variables that alter reinforcement effectiveness as a result of learning history
  - **CMO- T (transitive)** – Motivation is established for another object/activity in order to contact terminal reinforcer (e.g. if the terminal reinforcer is playing with a doll house– in order to do so you need all the furniture and dolls and therefore the motivation is established for the differer)
  - **CMO-R (Reflexive)**- Motivation is established for behaviors that will REMOVE item/activity or unpleasant stimulation
    - Increases value of escape as a reinforcer if pre req aren't strong this can be a big area of concern

## How do we establish motivation?

### PAIRING!!!

- ‘Pairing’ is the process of delivering positive reinforcement during or immediately following a behavior/activity
- Over time the neutral or aversive activity/behavior/person acquires reinforcing properties because it has been ‘paired’ with reinforcement
- Does not require compliance with a demand
- The process can be used to condition adults, peers, environments, activities, etc. as potential reinforcers

## How do we establish motivation?

### TIPS FOR PAIRING

- Remember that reinforcement is “free” when you are pairing
- Pair your voice and child’s name with reinforcement.
- Be aware of the child’s behavior and signs of interest.
- Reinforce all interaction and engagement. (approach behavior) such as eye contact, smiles, laughs, walking/running to you.
- Narrate the activities rather than instruct.
- Evaluate yourself often: does the child run to you or away from you?

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## How do we establish motivation?

### TIPS FOR PAIRING

- Withhold reinforcement when undesired behaviors occur.
- Do not turn reinforcing activities into a task.
- Avoid associating yourself with aversive events.
- Avoid statements such as “stop”, “no”, and “don’t”.
- Avoid asking questions (remember these are demands)

\*these same topics will be addressed when we move into peer to peer pairing...

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## Where to begin?

### MANDING

Antecedent to the mand=MOTIVATION

Essential skill for social interactions

- Different types
  - For items/actions
  - For missing items
  - For attention, yes/no, removal of something
  - For information
- Crucial to have a strong mand repertoire!

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## Who?-Manding to Adults

- Early communication from most young children starts with requests to adults.
- Mands are key pre-requisite skills for other more advanced social skills.
- Without strong basic mand repertoire with adults it will be difficult to teach more advanced social skills to be natural under the right motivation
- Adults responding to the student's mands will increase the value of others which will then condition attention and people as reinforcers rather than simple items
- Students need to be proficient at manding with adults before working on manding with other students

## Mand for missing items

- Coffee cart video manding for missing items with adult

## SOCIAL SKILLS PROGRAMMING

## General Guidelines for all level learners

- **PAIR-** Pair other children with reinforcement by having those who are ready walk over and give reinforcers to the learner non-contingently
- **MAND-** Once the children are effectively paired with reinforcement (the learner is now approaching the other children or no longer walking away from them and readily accepting reinforcers from peers), begin to have the learner mand for reinforcers that the other children hold.
- **RECEPTIVE INSTRUCTIONS-** When the learner is manding from the other children with no prompts needed, begin to have the other children ask the learner to do simple receptive directions that occur in play. For example: “Pass me the crayon” or “give me the red train”

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## General Guidelines for all level learners

- **MAND FOR ATTENTION-** Teach your child to mand for other children’s attention to show them things. If the attention of other children is not reinforcing to your child, begin to pair other kids’ attention with reinforcement.
- **INTERACTIVE PLAY-** Start to teach the children to engage in a game or activity together that they both enjoy and the learner needs little prompts to do. Examples of these are: board games, sand art, painting, water balloon activities, etc...
- **PRETEND PLAY-** Start to teach the children to act out pretend scenes from stories they have heard or movies they have watched. Once the children begin to act out stories spontaneously with no prompts needed, begin to reinforce any playing that occurs that is different from the original script.

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# General Guidelines for all level learners

Program Planning Sequence	
1.	Completed VB MAPP assessment (if possible).
1.	Determine if the student needs a behavior plan prior to implementing a social skills program OR if adding the social skills program as an intervention component is appropriate.
1.	Perform a supplemental social skills assessment such as "The Social Skills Checklist" McKinnon, "Autism Social Skills Profile" (Bellini), and/or "Skillstreaming Checklist" (Skillstreaming) (if applicable).
1.	Determine goals/social skills targets based on an analysis of the student's assessments. Must include consideration for age, appropriateness, functional use of the social skill to be taught, the unique needs of the student, and student's assessments (i.e. VB MAPP/social skills). Consider situations relevant to the learner's real-life circumstances in the school, home, and/or community when selecting goals and targets.
1.	Determine social skill program/lesson to be used to teach the targeted skill based on the assessment(s) and the unique needs of the student.
1.	Observe the student performing the targeted social skill and collect baseline data (this may have to be contrived if data cannot be collected in a naturally occurring situation. Example: playground, transitions, lunch time, group, etc.) (see data sheets provided)
1.	Determine any pre-requisite skill(s) critical to teaching the targeted social skill selected and record pre-requisites to be targeted on a skills tracking sheet in order of relevance for teaching the social skill. This may require a task analysis of the targeted social skill.  Or Begin teaching the specific targeted social skills. This would occur where teaching of pre-requisites skills is not necessary. Instruction includes appropriate data collection systems.
1.	Gather the necessary data collection form(s) for data based decision making. (i.e. cold probe, frequency collection sheet, etc.)  OR Use the probe data form provided with the social skills program/lesson you have chosen.
1.	Include a graph where skill acquisition and/or frequency/latency/duration/etc., can be recorded.
1.	Plan for daily teaching, as well as practice sessions of the target skill in the student's schedule. Practice sessions can be contrived in the natural settings. (Include other school/community environments/people/ and stimuli) in the sessions for generalization.
1.	Fill out the Social Skills Lesson Planner to prepare/guide daily lessons.
1.	Train staff and/or typical peers on all procedures related to SS program and skills being taught. Include training on contriving/capturing opportunities.
1.	Perform fidelity checks to ensure program is implemented as planned. Poor reliability requires retraining of staff/peers.

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# Who?-VBMAPP Level I Learner



## Social Skills for Level I Learner

- Conditioning attention as a reinforcer
- Develop and increase approach behavior through pairing and reinforcer identification
- Ongoing reinforcer identification across categories (edibles, items, activities, actions, social)
- Determining response form (vocal, sign, augmentative, textual, etc)
- Joint Attention
- Manding

## Conditioning Attention as a Reinforcer/ Approach Behaviors

- It is critical to establish attention as a conditioned reinforcer to ensure that the social skill development will be natural and generalized rather than rote-if taught too early students acquire skills that are not transferable
- Teaching social skills through pairing known reinforcers with neutral stimuli (people) can result as attention conditioned reinforcers (Taylor Santa, Sidener, Carr, & Reed, 2014; Dozier, Iwata, Thomason-Sassi, Worsdell, Wilson, 2012).

## Joint Attention

- One of the earliest forms of social communication
  - Coordinated attention between social partner and object/event in the environment (Taylor & Hock, 2008; Bruner, 1975; Mundy, Sigmond, & Kasari, 1994).
  - Two Elements (Taylor & Hock, 2008)
    - Responding to another's bid for joint attention
    - Initiations for joint attention from others

## Joint Attention

### 7 major factors using the operant analysis (Per Holth)

1. In social interactions that involve visual joint attention, the visual orienting of one person is under discriminative control of the pointing or visual orienting of another person.

2. Such discriminative control may be conditional upon other stimuli. For instance, such point or gaze following may be particularly likely in the presence of certain facial expressions, when someone says "Look!" or when you have asked for directions.

3. In a three-dimensional world, a great many different objects, events, or properties of objects and events may exist in the direction of someone's look, so that identifying the particular stimuli at which someone else is focusing must be jointly controlled by the direction of the look *and*

*something else.*

## Joint Attention

4. Both the extent to which someone follows another person's orienting, and the extent to which one operates to get others to follow one's own orienting depends on previous consequences of such behavior.

5. When one directs the attention of someone else, small changes in the right direction may function as reinforcers, and when following someone else's direction, a novel stimulus may, typically, function as a reinforcer.

## Joint Attention

6. In both cases, the reinforcers may have gained in strength because they are typical precursors of the moment of joint attention which, in turn, constitutes an occasion upon which other behavior (e.g., verbal behavior) is likely to be reinforced.

7. A limited number of exemplars of successfully following and directing others' attention may suffice to produce a continuous repertoire of such joint attention skills.

(An Operant Analysis of Joint Attention Skills, Per Holth 2005)

## Joint Attention using the operant analysis

### Practical issues:

- Having found that “joint visual attention is not spontaneously demonstrated by infants until about 10 months of age” and that, “given the appropriate feedback infants are able to acquire a gaze following response from about 8 months on,” Corkum and Moore (1995, p. 78) concluded that “learning is a possible mode of acquisition for joint visual attention.” --first step towards an analysis of the variables of which joint attention skills are a function.
- If joint attention skills are amenable to an operant analysis, learning protocols can be created and skills can be taught

(An Operant Analysis of Joint Attention Skills, Per Holth 2005)

## Joint Attention; sample

*SKILL TARGET: Social referencing-Establishing normal social stimuli as reinforcers*

If social stimuli that function as reinforcers for behavior in most people, including children, do not do so for behavior in children with autism, a crucial step may be to establish such events as reinforcers. The following outline of a training procedure will focus on establishing others' nodding and smiling as reinforcers.

## Joint Attention; sample

Training: Trainer and child are seated face-to-face at opposite sides of a table.

- Spread approximately 10 small edible reinforcers around the table.
- Any attempt from the child to take pieces from the table should be blocked.
- When the child sits quietly, nod and smile before you let the child take one item. If the child does respond, repeat the nod and smile, and prompt the child to take one item from the table.

## Joint Attention; sample

- Then, as long as you do not nod and smile, block any attempts the child may make to take things from the table, and when you nod and smile, let the child take another item, and so on.
- Let the time vary between each time you nod and smile. When the child takes items from the table only immediately following your nods and smiles, this constitutes a simple version of social referencing.

At this point the nods and smiles function as an SD for the child's response in taking items from the table and a conditioned reinforcer for any behavior that produces the instructor to smile and nod

(per holth)

## Video sample joint attention

- <https://www.youtube.com/watch?v=ndf9BFfDEFI>

Social attention must first be conditioned as a reinforcer before initiations for joint attention will occur.

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## Role of Eye Contact

- It is critical to condition the response of the communication partner as a reinforcer for social behavior and thereby arrange the conditions under which typical children develop social responses
- It has also been suggested that poor eye contact may adversely affect the educational gains of children with autism due to the relationship between eye contact and attending to the teacher and instructional demands (Greer & Ross, 2007; Lovaas, 1977).
- Case study defined eye contact as; movement by student's head and eyes so as to make direct contact with the eyes of the person from whom he was manding immediately prior to or simultaneous with the vocal mand response.

(Teaching Eye Contact to Children with Autism: A Conceptual Analysis and Single Case Study, Carbone 2013)

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## The Role of Eye Contact continued

Eye contact defined as in case study;

- A correct response was defined as the production of a one-word vocal mand that was immediately preceded or accompanied by an eye contact response. An incorrect response was defined as the production of a vocal mand that was not immediately preceded or accompanied by an eye contact response.
- The dependent measure in this study was the percentage of mands accompanied by eye contact during a 3 hr session.

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## The Role of Eye Contact continued

- The case study concludes that the sight of the listener's eyes and face were conditioned as reinforcers within the context of manding for preferred items and activities.
- If social consequences can be conditioned as reinforcers, as is displayed in this case, the implications for functional outcomes for children with autism using these and similar procedures is vast.
- The eye contact response targeted here is one step in a progression of increasingly complex social interactions

(Teaching Eye Contact to Children with Autism: A Conceptual Analysis and Single Case Study, Carbone 2013)

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## Eye Contact

- <https://www.youtube.com/watch?v=dexgIh44AdQ>

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## Mands & Other Language Skills

- After a basic mand repertoire is established it is important to broaden that skill set to more advanced mand repertoire with adults before moving into systematic programming with peers
- In reference to the other verbal operants it is critical to also build strong repertoires in tacting, tacting actions, tacting adjectives, tacting prepositions, etc
- Without a strong tact repertoire it will be difficult for students to engage in meaning conversations and exchanges involving a combination of mands, tacts, listener response, and intraverbals

## Video of Manding Session

- Corey video mand/tact

## Who?-VBMAPP Level 2 Learner



## Social Skills for Level 2 learner

- Continue to build strong mand repertoire with adults using mands for actions, missing items, information, etc
- Implement peer to peer mand sessions in the AS classroom
- Transfer skills acquired in peer to peer mand sessions with a variety of peers in the classroom and in the gen ed setting
- Continue to expand reinforcer identification to be age appropriate

## Who?-Peers

- When possible, target students that have previously shown interest in each other
- It is critical the students have go through peer to peer pairing process
- Select students who have differing interests in reinforcers, in other words, try to find reinforcers that both students will not both want to have (initially)

## Peer to Peer Pairing

- Ideal if have reverse inclusion opportunities
- Identify willing peer 'buddy' OR partner students accordingly
- Identify potential reinforcer for student, preferably one that is NOT a potential reinforcer for the peer AND that has multiple parts.
- Identify a potential reinforcer for the peer – use as promise reinforcer

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## Peer to Peer Pairing cont.

- Teacher will require peer buddy to approach student and deliver potential reinforcer – no additional demand requirement for student
  - Teacher will guide peer on how to differentially reinforcer student based on approach and interaction
- Teacher will differentially reinforce peer for compliance

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## Peer to Peer Pairing – Structured Session

- Identify willing peer ‘buddy’ OR partner students accordingly
- Identify potential reinforcers for each student
  - For the exchange - preferably items/activities that have multiple parts AND activities that are not preferred by both students
  - To differentially reinforcer – edibles work best
- Schedule session – short and effective, 5-10 min

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## Peer to Peer Pairing cont.

- Give student A student B’s preferred items and student B student A’s preferred items
- Give each student a few pieces of the potential reinforcer to increase motivation
- The teacher will dictate the interaction – will prompt each student to deliver/receive items
- The teacher will specifically reinforcer each student for being a “giver”

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## Peer to Peer Pairing cont.

- Data Collection
  - Probe data – 1) Accepting from a peer; 2) giving to a peer
  - Frequency of prompted and unprompted – 1) Accepting from a peer; 2) giving to a peer
- Graphing
  - Frequency of prompted and unprompted
- Criteria for Mastery
  - Minimum = Three consecutive Yes cold probes on each target

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### Peer-Peer Pairing Data Sheet

Student:				Notes
Accepts from peer		Y N		
Gave to peer		Y N		
Accepts from peer		Gives to Peer		
P	S	P	S	

Student:				Notes
Accepts from peer		Y N		
Gave to peer		Y N		
Accepts from peer		Gives to Peer		
P	S	P	S	

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## What's next?- Peer to Peer Manding

### Materials needed for reinforcers

- Basic methods for determining reinforcers to be used in mand training – it is critical to select items to be used as targets and have a variety of items to be used as reinforcers
- Previously mastered mands
- Ongoing preference assessments
- Materials that have many parts AND that the student has had exposure to in the past
  - Motivation for task completion; CMO-T
  - Examples: train track, legos, doll house

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## Reinforcer Identification

- Conducting a Preference Assessment – we can only identify reinforcers when we see how presentation of the item or event alters the frequency of the behavior it follows.
- Categories Commonly Included on Preference Assessment:
  - Consumables, food/drink
  - Tangible items, toys, materials
  - Activities that involve movement
  - Games
  - Social Interactions
  - Music

**Preference Assessment: Pencil/Marker Form**

Individual's Name: \_\_\_\_\_  
 Date: \_\_\_\_\_ (DATE)

**Instructions:**

1. Give 8 items per session. Allow the individual to contact each item before the session begins.
2. Present 2 items on each trial (see below). Separate each item by at least 14 inches with the adult or item of the individual, and instruct the individual to select one.
3. Circle the item corresponding to the item selected and remove the unselected item. If no item is selected on 3 sec, remove items and put a check mark through the trial.
4. Continue until all pairs have been presented.
5. Record the final selection of items each pair was selected.

Trial	Pair 1	Pair 2	Pair 3	Pair 4	Pair 5	Pair 6	Pair 7	Pair 8
1	A vs B	C vs D	E vs F	G vs H	I vs J	K vs L	M vs N	O vs P
2	C vs D	E vs F	G vs H	I vs J	K vs L	M vs N	O vs P	A vs B
3	E vs F	G vs H	I vs J	K vs L	M vs N	O vs P	A vs B	C vs D
4	G vs H	I vs J	K vs L	M vs N	O vs P	A vs B	C vs D	E vs F
5	I vs J	K vs L	M vs N	O vs P	A vs B	C vs D	E vs F	G vs H
6	K vs L	M vs N	O vs P	A vs B	C vs D	E vs F	G vs H	I vs J
7	M vs N	O vs P	A vs B	C vs D	E vs F	G vs H	I vs J	K vs L
8	O vs P	A vs B	C vs D	E vs F	G vs H	I vs J	K vs L	M vs N

Item \_\_\_\_\_      3 Trials Selected \_\_\_\_\_      Item \_\_\_\_\_      3 Trials Selected \_\_\_\_\_  
 A \_\_\_\_\_      B \_\_\_\_\_      C \_\_\_\_\_      D \_\_\_\_\_  
 E \_\_\_\_\_      F \_\_\_\_\_      G \_\_\_\_\_      H \_\_\_\_\_  
 I \_\_\_\_\_      J \_\_\_\_\_      K \_\_\_\_\_      L \_\_\_\_\_

## Conditioning peers as reinforcers

- An important piece for students when developing social skills is recognizing that other people in their environment can be of value to them -if this component is missing the student has not actually acquired a generalized concept and the training process will take much longer to develop in the natural environment

## Important factors before implementation

- Select the response form: vocal, signing, written, picture exchange, communication board, electronic device-can the peer respond to that specific response form
- Does the student respond socially when instructor pairs social interactions with the delivery of reinforcements
- Does the student display mand techniques across multiple conditions, people, and exemplars
- Does the student have a broad repertoire of mastered mands that can be used in peer to peer sessions
- Does the student have MO for the items selected for peer to peer sessions



## Basic peer to peer manding procedures

- Choose items students have high MO for and will want during sessions
- Control environment:
  - place students so they have access to each others items, but cannot access their own
  - Students should face each other at an angle
  - Sanitize environment
- Reinforce students at a high rate for requesting and delivering items – fade instructor reinforcement as student behavior is shaped
- Instructors prompt and reinforce from behind providing very little interaction
- If the instructor needs to provide a prompt from behind (partial physical for delivery) or vocal/sign for the mand to the peer should occur with limited interaction

## Peer to peer procedures continued

- Role of the teacher
  - NOT to help contrive motivation for the item
  - Help peers interact
  - Prompt the speaker to mand with a vocal prompt
  - Prompt the listener to respond with NONVOCAL prompts

## Use of differential reinforcement

- Reinforce responses that meet the targets that is identified for that specific student : unprompted deliveries, unprompted mands, mand for actions, mand for attention, duration of peer interactions
- Use differential reinforcement to shape student behavior during peer-to-peer manding sessions
- Provide high levels reinforcement for desired responses

### Peer-Peer Mand Data Sheet

Student:				Notes
Mand from peer		Y N		
Gave to peer		Y N		
Mands from Peer		Gives to Peer		
P	S	P	S	

Student:				Notes
Mand from peer		Y N		
Gave to peer		Y N		
Mands from Peer		Gives to Peer		
P	S	P	S	

## Outcomes

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- Students see peers as being reinforcing
- Increase in social play skills
- Prerequisite skills for social skills instruction
- Increase in initiation of interaction with peers
- Increase in awareness of peers
- Less parallel play, more cooperative play
- Students share reinforcers with peers
- Students are observed as enjoying the company of their peers

## Where next?

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- Move from select peers to random peers in the classroom
- Peer to peer opportunities in the natural environment with peers from multiple settings

**Social Skill Observation Log**

Student: \_\_\_\_\_ Observer: \_\_\_\_\_ Date: \_\_\_\_\_ Time: to \_\_\_\_\_ from \_\_\_\_\_

**Cold Probe** - Responds to Peer Y N      Initiates with Peer Y N      Engages with Peer Y N

Optional coding: (+) = appropriate response (+3) ; appropriate response in 3 seconds ; (-) = non-appropriate response ; (-3) non-appropriate but within 3 seconds ; NR= no response

Activity	Contrived Or Unplanned	Peer(s)/adult(s) participating	Individual (I) or Group (G)	Initiates +, -, NR	Reciprocates +, -, NR	Engages +, -, NR

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## Demographic – Case Study

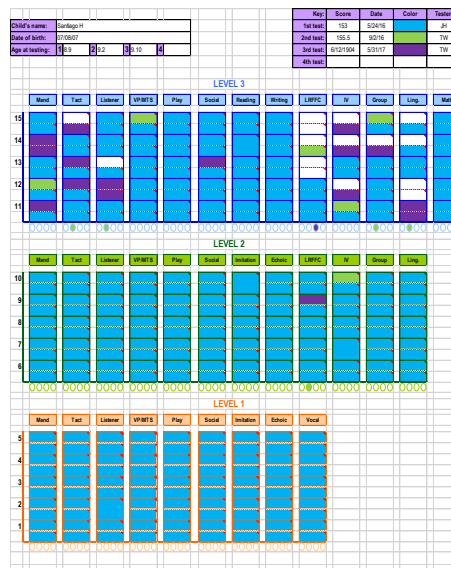
- Suburban elementary school with a newer partially/self-contained classroom for autistic support.
- Fully included classrooms are supported by the PA Autism Initiative in the areas of Applied Behavior Analysis and Verbal Behavior
- Previous school year – large group staff training on Autism that left additional staff questions unanswered. Special Education teacher suggested it was not successful.
- District has a very strong reverse inclusion program at the middle school level.



## Timeline for Peer to Peer Manding

- Identified peer participant - 10/1/16
- Initiated conversation with staff - 11/8/16
- Provided initial student training - 11/29/16 (spoke to student about pairing and manding)
- Began peer to peer pairing with student 1 - 11/29/16
- Began peer to peer manding with student 1 - 12/13/16 (before student began this, teacher modeled manding and explained what the students should be doing, looking for, etc.)
- Follow-up student training - 3/14/2017
- Began peer to peer manding with student 2 - 3/21/17
- Began data collection peer to peer manding with student 2 - 3/23/17
- Video 1 - 5.18.2017
- Demonstrated typical peer mands to target peer - 5.18.2017
- Demonstrated peer to peer manding for information using "what" - 5.18.2017

## VBMAPP Level 3 learner



## Data Sheet Examples

Handwritten data sheet titled "Avery's Manding Sessions". The table has three columns: Date, #, and IP.

Date	#	IP
3/16/17		30
3/16/17	0	23
4/1/17	5	17
4/20/17	8	15
5/1/17	8	21

Handwritten data sheet titled "Avery's Manding Sessions". The table has three columns: Date, #, and IP.

Date	#	IP
3/16/17		54
3/16/17	0	174
4/1/17	8	33
4/20/17	8	15
5/1/17	8	21

## Future Goals for Dissemination Include:

- ✓ Reliability data (Vollmer)
- ✓ Additional staff and student training both large group and individual
- ✓ Student buddy club
- ✓ Social validity for staff members at large
- ✓ Staff and student reinforcement opportunities (both immediate and delayed)

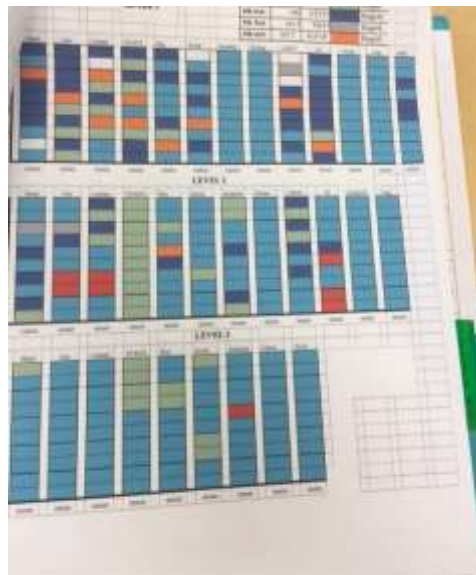
## Sample

- Video of peer to peer manding

<https://drive.google.com/file/d/0B-rtH0eRuirNWWxTbUhzWnZTTnM/view?ts=59760016>

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## Who?-VBMAPP Level 3 Learner



## Language Skills Needed

- It is important for learners to have acquired language skills to be able to follow rule governed behavior –this is critical in order to benefit from social skills instruction at higher levels
- Rule governed behavior: “behavior is controlled by verbal antecedents rather than more directly by its particular consequences” (Catania, Shimoff, & Matthews, 1989, p.119).
- If learners contact higher rates of reinforcement through behaviors that are not socially acceptable more efficiently than they may contact reinforcement for socially appropriate rule-following behavior, reviewing rules for behavior is not likely to result in improvement in socially appropriate behaviors. (Kittenbrink NAC 2016)

## How to get there?

- If students have language skills, but rule-governed behavior is not established as a generalized repertoire
  - Teach basic rules with specific prompting and differential reinforcement for rule-following and then fade differential reinforcement and have direct contingencies support maintenance of the behavior.



## Behavioral Skills Training

- Research validated treatment package used to effectively teach a variety of skills to a variety of populations a variety of skills.
  - Core elements: instruction, modeling, rehearsal, feedback  
(Buck, 2014)

## Skillstreaming

- Skillstreaming (social skills curriculum)-students need to have level 2 completed and majority of Level 3 for the VBMAPP in order to understand the language in the curriculum and respond to rule governed behavior
- A behavior skills training- including an assessment, instructional guide, curriculum, and resources to teach a variety of basic social skills.
- Materials: Behavior skill cards, student manual, instructor manual, video models, lesson plans & activities.
- Reinforcement: Will likely need reinforcement which will need to be faded systematically.

## Skillstreaming

- Each skill is broken into small steps. Steps are formally taught through behavioral skills training.
- Homework is assigned after.
- Natural Environment Teaching (NET) opportunity to practice skills should be structured.

## General instructor rules

- Define and communicate rules clearly and explicitly
- Tell students what to do rather than what not to do
- Rules should be communicated in a way that can facilitate memorization
- Increase compliance is group works together to create and set the rules
- First thing the group should work on together

## Teaching Procedures

- Core Teaching Procedures
  - Modeling
  - Role-Playing
  - Performance Feedback
  - Generalization Training

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## Skillstreaming- Behavioral Skills Training

- Step 1: Define skill
- Step 2: Model skill
- Step 3: Establish student need for skill
- Step 4: Select the 1<sup>st</sup> role player
- Step 5: Set up the role play
- Step 6: Conduct role play
- Step 7: Provide performance feedback
- Step 8: Select the next role-player
- Step 9: Assign skill homework

## Reinforcement during lessons

- Set contingencies
- Immediacy
- Consistency
- Frequency
- Amount
- Variety

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## Generalization of skills taught

- Thin/delay reinforcement
- Fade prompts
- Additional sessions of previously mastered lessons
- Prepare for real-life nonreinforcement
- Systems for reinforcement in the natural environment
- Use natural reinforcers

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## Sample lesson

### Lesson 10 Joining in-does the student decide on the best way to become part of an ongoing activity or group?

Key : 1 – Almost Never    2 – Seldom    3 – Sometimes    4 – Often    5 – Almost Always

#### Joining In Rules

1. Decide if you want to join in an activity others are doing
2. Decide the best way to join in
3. Decide the best time to join in
4. Join the activity

## Sample skills

	Target	Date Introduced	Date Mastered	Date Generalized	Retention Check(s)
1	Listening				
2	Starting a Conversation				
3	Having a Conversation				
4	Asking a Question				
5	Saying Thank You				
6	Introducing Yourself				
7	Introducing Other People				
8	Giving a Compliment				
9	Asking for Help				
10	Joining IN				
11	Giving Instructions				
12	Following Instructions				
13	Apologizing				
14	Convincing Others				
15	Knowing Your Feelings				
16	Expressing Your Feelings				
17	Understanding the Feelings of Others				
18	Dealing with Someone Else's Anger				
19	Expressing Affection				
20	Dealing with Fear				
21	Rewarding Yourself				
22	Asking Permission				
23	Sharing Something				
24	Helping Others				
25	Negotiating				

## Treatment fidelity

		YES	NO	N/A
Orientation	1. Does instructor choose appropriate skill to target?			
	2. Does instructor prepare Social Skill Lesson Plan with the following components? a. Skill area? Y N b. Functional definition (ABC)? Y N c. Objective? Y N d. What will be modeled for learner? Y N e. List of what to do to when performing the skill? Y N f. List of what not to do when performing the skill? Y N g. Homework plan, if applicable? Y N			
	3. Does instructor have evaluation criteria with the following components? a. Goal objectives listed (ex: appropriate voice/volume, eye contact, etc.)? Y N b. Appropriate social responses with check system? Y N			
Instruction Delivery	4. Does instructor baseline skill at the appropriate level (adults, peers, novel situations) for 3 days prior to teaching lesson, using the Evaluation Criteria Rating Form? a. Rates each goal objective (appropriate voice/volume, eye contact, etc.)? Y N b. Indicates appropriate and inappropriate social responses using + and -? Y N c. Rates appropriate and inappropriate social responses? Y N d. Adds up score and calculates percentage? Y N			
	5. Does instructor run a cold probe of the skill at the appropriate level (adults, peers, novel situations) prior to teaching lesson? a. Rates each goal objective (appropriate voice/volume, eye contact, etc.)? Y N b. Indicates appropriate and inappropriate social responses using + and -? Y N c. Rates appropriate and inappropriate social responses? Y N d. Adds up score and calculates percentage? Y N			
	6. Does instructor model: act out situation for learner?			
	7. Does instructor explain what the learner should do?			
	8. Does the instructor add up score and calculates percentage?			
	9. Does instructor explain what the learner should not do?			
	10. Does instructor demonstrate the correct response?			
	11. Does instructor require the learner to act out the situation?			
	12. Does the instructor provide feedback to the learner? a. Tells the learner what he did correctly during the role playing situation? Y N b. Tells the learner what he needs to improve? Y N c. Models appropriate responses (if needed)? Y N d. Restates what he should/shouldn't do? Y N			
	13. Does instructor provide social praise and, if necessary, other forms of reinforcement (e.g., tokens, edibles, tangibles)?			
	14. Does positive reinforcer compete with negative reinforcement or automatic reinforcement?			
	Notes:			
				<b>___ / 14</b>
				Percentage of Y's

## Video of Big Bang Theory

- [https://www.youtube.com/watch?v=6ca7lx0NjYc&list=PL0yIYxk2jTIDnawbdJEH\\_fbKXL3a0IMHV&index=2](https://www.youtube.com/watch?v=6ca7lx0NjYc&list=PL0yIYxk2jTIDnawbdJEH_fbKXL3a0IMHV&index=2)
- <https://www.youtube.com/watch?v=htzgLnD2F78>

## Summary of Social Skills

- Social skills are complex-use an assessment to guide programming and decisions
- Social skills require specific teaching and should not be left up to chance
- Specific prerequisite skills are necessary prior to starting a structure curriculum
- Social skills instruction is necessary and should start early BUT it is never too late!
- Teach systematic at first and then move to the natural environment
- Keep in mind age appropriateness and value of the reinforcers
- **HAVE FUN !**

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**Commonwealth of Pennsylvania**

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