Video-based Group Instruction: A Social Skills Training Program for Adolescents with ASD

Presented at the START Conference
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Session Goals
Participants will be able to:

- Assess contextual variables that will facilitate an effective social skills training program (e.g., scheduling, grouping)
- Identify why video is used within a group format and to target social behavior
- Assess the social behavior of adolescents with ASD
- Use video vignettes to teach social behaviors to multiple adolescents with ASD/ID at the same time
- Make data-based decisions about instructional steps
- Address interfering behaviors
- Identify and prioritize target skills for ongoing instruction
Why Social Skills?

Social skills connected to…

Quality of life (Orsmond, Krauss, & Seltzer, 2004)

Occupational outcomes (Rao, Beidel, & Murray, 2008)

Independent living (Howlin, et al., 2004)

Social Behavior of Adolescents with Autism vs. Other Disabilities (USA)

Questionable social skills training procedures

Need more than adults as social partners
Cool, but not what I had in mind

Revisit Social Skill Instruction

- Group instructional format; more authentic and practical
- Utilize Applied Behavior Analysis
- Incorporate Technology
  - Video modeling promotes rapid acquisition and generalization
  - Students seem to like it
- Deliver high intensity of instruction:
  - 1 hr per day, 5 days a week

Schools provide optimal setting for this type of instruction
Target Social Skills

In Public Schools

With other teens

Emphasize Generalization

Video-based Group Instruction
Question #1:
What is Video-based Group Instruction?
- Model of daily social skills instruction
- Delivered in small group arrangement
- Explicit, scripted, and systematic curriculum
- Video used to promote attending during group instruction
- Skills taught through multiple methods
  - Direct instruction
  - Natural environment training
  - Peer mediation

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<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Timing</th>
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<tbody>
<tr>
<td>Warm up w/ Rule Review</td>
<td>Label, define, and practice “rules” for group; set up token economy system</td>
<td>5 minutes</td>
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<tr>
<td>Explicit Skill Instruction #1</td>
<td>Video modeling of explicit skill – 5 trials per student</td>
<td>15 minutes</td>
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<tr>
<td>Explicit Skill Instruction #2</td>
<td>Video modeling of explicit skill – 5 trials per student</td>
<td>15 minutes</td>
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<tr>
<td>Structured Activity</td>
<td>Interactive group activity to practice targeted skills</td>
<td>7-10 minutes</td>
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<tr>
<td>Point Trade-in for Preferred Activity</td>
<td>Students exchange all points earned to “rent” preferred items</td>
<td>7-10 minutes</td>
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<tr>
<td>Wrap up</td>
<td>Review what learned; sometimes light snack</td>
<td>3 minutes</td>
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</table>
Question #3: Will it work in my school?

- Ideal: context that supports daily course in social skills
- Better if peers can take simultaneous course to learn about ASD
- Ratio is around 1:5
- Location: open space to move around and systematically place materials
- Video recording, editing, and display capacity
- Implementer: teacher, SLP, social worker, sometimes with paraprofessional support

BEFORE WE BEGIN...

Setting up for success: Selecting target behaviors, identifying preferences, and conditioning reinforcers
Assess a range of behaviors

- Interacts with Others
  - Joins in activities
  - Invites others to activities
  - Takes turns
  - Comments during play
- Conversational Skills
  - Maintains
  - Asks or talks about others
  - On topic (attending)
  - Looks toward / eye contact
- Conventions / Social Pragmatics
  - Smiles
  - Distance
  - Volume and clarity
  - Personal appearance and awareness
- Group working skills
  - Allows others to participate
  - Compromises

- Noticing others
  - Facial expressions
  - Nonverbal cues
  - Offers assistance
  - Responds to greetings
  - Responds to questions
  - Active listening
- Complex Initiations
  - With others in groups
  - Joins conversation
  - Introduces self
- Interfering Behaviors
  - Slow response
  - Fixated on self-interests
  - Inappropriate comments
  - Inappropriate gestures or other physical behaviors

**Autism Social Skills Profile**

<table>
<thead>
<tr>
<th>Skill Area</th>
<th>How Often</th>
<th>Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invites Peers to Join Him/Her In Activities</td>
<td>N S O V</td>
<td></td>
</tr>
<tr>
<td>Joins in Activities With Peers</td>
<td>N S O V</td>
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<tr>
<td>Takes Turns During Games and Activities</td>
<td>N S O V</td>
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<tr>
<td>Maintains Personal Hygiene</td>
<td>N S O V</td>
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<tr>
<td>Interacts With Peers During Unstructured Activities</td>
<td>N S O V</td>
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<tr>
<td>Interacts With Peers During Structured Activities</td>
<td>N S O V</td>
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<tr>
<td>Asks Questions to Request Information About a Person</td>
<td>N S O V</td>
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</tbody>
</table>

Bellini, 2006: Google “Autism Social Skills Profile” for access
Generating the Instructional Universe

Interacts with Others
- Joins in activities

Join in preferred activities
- Join when invited
  - Response to invitation
  - Authenticity of invitation
- Ask to join
  - Types of initiations
  - Who/when to ask
  - Accepting varied responses (yes vs. no)
- Stationary activities
- Mobile activities
- Join in w/preferred people

There are a range of antecedent events and consequences for this behavior. We want to identify the universe of antecedents and consequences and begin teaching across all of them. But even then, we are not done. We need to teach across non-examples as well.

Multiple Video Exemplars
Script for “Comment”

Script #1
- Students are seated at a table looking at magazines together
- Student 1: “Wow!” (Gestures or gently taps peer) “Classic cars are cool!”
- Student 2: Smiles and checks out Participant 1’s magazine with him.

Script #2
- Students are seated at a table putting a puzzle together
- Student 1: “This is fun!” (Gestures or gently taps peer) “I really like puzzles!”
- Student 2: Smiles and says, “Me too!”

Script #3
- Students are in hallway and S1 notices S2 book in arms.
- Student 1: “That looks like a good book” (Gestures or gently taps peer)
- Student 2: Smiles and says, “It is. I really like it.”

ACTIVITY

In small groups, select from following list of behaviors:
- Introducing yourself
- Offering assistance
- Inviting to join activity
- Asking social questions

Generate 3 or more scripts that incorporate a range of antecedent and consequence variables
About the Behaviors

<table>
<thead>
<tr>
<th>Target Behavior</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Complex Initiations</strong></td>
<td></td>
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<tr>
<td>• Inviting to join</td>
<td>Approaches peer</td>
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<td>Obtains peer attention</td>
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<td>Requests peer to join in a specific activity</td>
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<tr>
<td>• Asking to join</td>
<td>Approaches peers involved in activity</td>
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<td></td>
<td>Obtains peer attention</td>
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<td>Requests to join activity with peers</td>
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<td><strong>Social Awareness</strong></td>
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<tr>
<td>• Ask about others</td>
<td>Obtains peer’s attention</td>
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<td>Asks a question about interest of peer</td>
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<tr>
<td>• Offer assistance</td>
<td>Vocalize offer to help</td>
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<td>Engage in behavior similar to social partner</td>
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<td><strong>Reciprocity</strong></td>
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<tr>
<td>• Maintain conversation</td>
<td>(1) Respond to social partner and</td>
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<td>(2) Ask follow-up question or make open ended comment</td>
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</tbody>
</table>

Preference Assessment

- What is it: Method to identify things our students like, relative to other things
- Why is it essential: VGI’s success relies on principals of reinforcement – preferences might function as reinforcers
- How do I do it: Many ways…
  - Easy, but unreliable: Ask teachers and parents what the child likes
  - Harder, but reliable: Give child several options and see what he/she picks
  - Middle, but uncertain: Ask child which of several items he/she wants
What we use

- Potential Reinforcement Profile
  - Parents & teachers complete
  - Students complete alternate version
- Formal Preference Assessments
  - Every 2-3 weeks
  - Set out several items and see what students interact with (record first item selected and item used most)
- Assessing Preferences within each session
  - Student rents for preferred activity
  - Ask students “which of these…”

Token or Point System

- Essential part of group instruction
- Students can earn points toward preferred items they can access later
- Multiple ways to make this work
  - Need to devise a system that works for group
  - We incorporate preferred items into final activity and have students “rent” items with points earned during group
Point System Procedures

- Students earn points for following specific rules
  - Rules determined on group-by-group basis and change as skills associated with rules are acquired (though students can earn points for demonstrating old rules)
  - These rules should be defined, modeled, and practiced before points are started
  - Deliver points at programmed intervals contingent on following rules
  - Points are exchanged at designated “trade in” times
  - This might require frequent trade-ins following a short “session” with length extended over time

Point System Procedures Cont’d

- Students have point card with them at all times
- Staff add points (or teach students to manage) for performance of target behavior
  - Points delivered throughout ENTIRE session
  - Use unique point marker so that it cannot be easily duplicated (decorative hole punchers can be perfect)
  - Points are not taken away
  - We don’t say “Do you want your point? Show me good watching.” Instead, just reward correct instance of rule following
- Trade in points prior to final activity
- Remaining points saved for big ticket items (e.g., school store)
Point Card Example

Cut rules off bottom
Glue/tape together for 2 sides
Laminate and use dry erase marker

Goal must be attainable
Start low and build based on success
You want them to reach trade-in

<table>
<thead>
<tr>
<th>Minute intervals</th>
<th>Looking pleasant</th>
<th>Being polite</th>
<th>Hands down</th>
<th>Follow instructions</th>
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Goal: 28
Total: __________

1. Looking pleasant - When people are talking to you, look at them with a nice face. Do not frown or make funny faces at them. If they say something nice, smile.

2. Being polite - Do and say nice things for people. Do not insult people. Let others have a turn with your things.

3. Hands down - Keep your hands on the table in front of you or at your side. Do not put them up in the air or flap them around.

Logistics

People involved
- 4-5 Adolescents with ASD: similar skill sets
- 1 Group Leader
- 1 Support (optional)
- 2-3 Typical Peers (optional)

Materials
- Video display device
- Reinforcement system
- Preferred items that evoke interaction
- Data collection
- Video feedback mechanism (optional)
Warm-up and Rule Review

The Warm-up
- 5-7 minutes
- Welcome everyone
- Discuss why we have a social skills class (e.g., learn some new ways to make friends)
- Use simple conversation questions to get students “warmed up” to talking

Identify and Review Rules

- Behaviors that interfere with positive social interactions – may or may not be similar for each student
- All participants will start with 2 rules
- Teaching Procedures
  - Label & Model
  - Define
  - Practice
  - Differential Reinforcement w/tokens
  - Rapid pace of instruction with learning opportunities embedded for all participants (see video)
Warm up

Procedures (text in red is what facilitator should say):

- Welcome everyone to group and discuss why we have a social skills session everyday (e.g., help us learn to talk to people, make friends). During early sessions, the teacher provides the information and then immediately asks students to repeat. During later sessions, teacher asks students to provide information.
  - Example #1 (early session): “Today, we are going to learn some new ways to make friends. You can make friends by talking to people and by smiling at people.” Note that these are just examples, the skills should be specific to rules for that day. “Bobby, what is one way to make friends?”
  - Example #2 (later session): “Bobby, tell us a way to make friends.” Bobby answers “smile at people.” “Yep, that is a great way to make friends.”
  
- Note: We can build on the examples above and involve others by asking a peer to repeat: “Joey, what did Bobby just say?” And provide praise w/token or edible for attending if Joey can repeat. This tests whether members are attending to one another during this portion of the group. If Joey doesn’t know, prompt him to ask Bobby “Bobby, what did you say?” Then ask Joey again, but this time only provide praise.

Review of Rules: Example

Sound happy: sounding happy means...

Look at friends: looking at friends means...
Explicit Skill Instruction

Objective: Teach 2 skills per group w/5 trials per participant

Procedures
- Label skill
- Show video model
- Provide student w/opportunity to imitate; peers as social partners
  - If correct, allow naturally occurring consequence
  - If incorrect, use scripted prompt
  - If still incorrect, use “nice try, next time…” statement
- Repeat with different video exemplar
  - Rotate first responder for each trial
- Must guard against slowing down
  - Peers waiting turn can “rate” performance
  - Seek other types of learning opportunities

Introducing Skills

Create conditions that increase the likelihood that the students will perform the targeted social skills
- Select skills that lead to preferred outcomes – at least at first
- Identify and prepare preferred items; have ready to use in target behavior trials
About the video models

- Similar age
- Multiple examples of behavior
- Familiar items embedded
- Include antecedent conditions, behavior, and consequence
- Consider the social partner (generalization)
- Start with brief clips

Direct Skill Instruction

1. Instruct to attend
2. Show video model
3. Chance to imitate
4. Differential
5. Repeat Sequence

Behavioral Domains

(1) Complex Initiations, (2) Social Awareness, (3) Social Reciprocity
Teaching Targets: Sidebar

- The more skills you have readily available that embed preferred consequences into the video, the easier this is.
- Generate ideas for embedding preferred outcomes into the following target behavior:

Asking others for information

Delivering Instruction

- 30-40 minutes
- Sit at table, introduce plan, label first target skill
- “We’re going to learn some new ways to talk to and hang out with our friends. First we’re going to learn how to join friends who are doing something we like to do too. I want everyone to watch the people in the movie so that you can learn to join a friend in a cool activity just like the people in the movie do.”
- Show video
Transition to Structured Activity

- Once all trials for both targeted social skills have been completed, bring all students back to main instructional area.
- Have activities that evoke target skills ready
  - Play a game
  - Create cooperative task (e.g., mixed up puzzles)
- Provide a little coaching “now is a really good time to practice…”
- Can incorporate goal setting w/feedback
- Can record activity and play back for students

Final Activity

- Participants come back to group table and review all skills worked on for day
- Participants can trade in points for preferred activity (use menus, or other system)
  - Tie into class-based reinforcement system
  - Livonia example: spend some, save some
About Preferred Activities

• Students have a chance to trade-in points earned to select a preferred activity
  – Flying things
  – Racing cars
  – Games with sound
  – Challenges with selecting age vs. developmentally appropriate materials

• Measure targeted behaviors during preferred activities to assess generalization

Optional Elements

Video Feedback
- Show videos collected during structured activity
- Participant and peers rate performance on target behavior
- Always praise something from the video
- Provide points:
  - For any identified instance of a target social skill
  - For the absence of interfering behaviors

Peer Mediation
- Incorporate during instructional trials or activity periods
- Must train peers to provide correct cues and consequences

Goal Setting and Reporting
- Incorporate time to give “practice” procedures
- Have participants set a goal to perform target behavior a certain number of times before the next session
Family Consultation

▲ Social Coaching

▲ Model-used primarily as a generalization strategy; families will be shown how to use it to assist children to generalize the skills you teach them in groups
  - Identify and define skill with student participation
  - Role play or use video model
  - Set-up reinforcement system
    - Contingency contracts
    - Goal setting
    - Systematic fading of prompts and coaching

▲ Occurs at least once each month

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Data Collection

Performance of Target Skills during VCI Trials: Record "v" if student performs skill after video and additional prompt. Record "*" if student performs skill after video but without additional prompt.

<table>
<thead>
<tr>
<th>Student #1</th>
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Notes:

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Data Collection

- Record each instance of target skill
  - Correct/Incorrect;
  - Independent/prompted
  - Code for both skills
  - Also code for attending to video

- Also code responding to peers – when applicable
  - Does student incidentally respond appropriately to peer during peer focused trial

- Tricks to help: pre-populate names, use clipboard

### Percentage of Correct Social Behavior for Participant #1

#### Baseline

Complex Initiations

- Percentage of trials with correct social response

Sessions
Percentage of Correct Social Behavior for Participant #1

Complex Initiations

Baseline VGI

Sessions

Percentage of trials with correct social response

Baseline VGI Video Fading

Complex Initiations

Sessions

Percentage of trials with correct social response
Program Modifications

- Script to support language
- Extra dosage of video
- Separate from group: teach responding to other videos with highly preferred consequences
Outcomes

△ Many participants rapidly acquire targeted social skills and maintain skills as video is faded
△ Emergence of learning to learn from video
△ Broad outcomes yet to be assessed, but we are working on it
Percentage of trials with correct social response

Complex Initiations
Social Awareness
Social Reciprocity

Baseline

Joshua Plavnick, PhD, BCBA-D
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**Video-based Group Instruction for Adolescents with ASD & Intellectual Disabilities**
Joshua B. Plavnick, Ph. D., BCBA-D - MSU

<table>
<thead>
<tr>
<th>INTENDED OUTCOMES</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>Identify organizational components that influence implementation</td>
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<tr>
<td>Learn strategies for grouping individuals with ASD for social skill instruction</td>
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<td>Learn about the process for preparing to administer a video-based social skills group</td>
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<td>Identify resources in their own settings to support sustained implementation of a daily social skills program</td>
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<table>
<thead>
<tr>
<th>RELEVANCE OF CONTENT</th>
<th>1</th>
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<tbody>
<tr>
<td>This information made me think about peer-mediated social skills training, and natural environment training procedures in a new way.</td>
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<tr>
<td>I can use this information in my everyday planning and work.</td>
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<table>
<thead>
<tr>
<th>USEFULNESS OF MATERIALS</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>The materials for this presentation were useful.</td>
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**ONE MINUTE TAKEAWAY**

List what jumped out at you today? How will this information help you think about your work?

______________________________

______________________________

**OTHER COMMENTS / IDEAS / SUGGESTIONS:**

______________________________

______________________________