Using Video Modeling to Teach Social Skills with Elementary Students

MICHELE GLYNN, M.A.
ASD TEACHER
MINNEAPOLIS SCHOOLS

TAMI CHILDS, PH.D.
ASD COORDINATOR
MN LOW INCIDENCE PROJECT
Collaboration between MN Department of Education & MN ASD Low Incidence Project

Received grant to be involved in the 2 year NPDC-ASD Project in 2010

Individual programs throughout the state applied and 3-5 chosen as model sites
Evidence Based Practices and Applications in Minnesota?

- What practices should I use in teaching?
- What are the practices & what is evidence?
- Who defines EBPs?
- How can I learn more about EBPs in Minnesota?
- What are some practical applications and teacher perspectives?
Who defines EBPs?

- National Autism Center (NAC)
- Centers for Medicare and Medicaid Services (CMS)
- National Professional Development Center on ASD (NPDC-ASD)
- Best Evidence Encyclopedia
- Institute for Educational Sciences Doing What Works
Practices that are considered evidence based:

- Have evidence to suggest the practice works with groups of students similar to students you intend to work with.

- The evidence of effectiveness has been found repeatedly in different environments and locations with large numbers of students.

- Utilized research studies that accurately collected the data and linked it directly with the identified desired outcome of the practice.

- Have strong evidence that is considered significant.
Welcome to our new website! We are pleased to be able to continue developing resources and materials for teachers and interventionists in improving evidence-based practices (EBP).

READ MORE

AFIRM

Autism Focused Intervention Resources and Models

Coming Soon!

BRIEF NPDC OVERVIEW VIDEO

http://www.fpg.unc.edu/~autismPDC
Goals of the NPDC-ASD Project

- Promote use of evidence-based practices (EBP) to increase outcomes for children with ASD.
- Increase the number of highly qualified personnel serving children and youth with ASD.
- Increase the professional development capacity of states.
NPDC-ASD
Definition of EBP

To be considered an evidence-based practice for individuals with ASD, efficacy must be established through peer-reviewed research in scientific journals using

- *randomized or quasi-experimental design studies*. Two high quality experimental or quasi-experimental group design studies,

- *single-subject design studies*. Three different investigators or research groups must have conducted five high quality single subject design studies, or

- *combination of evidence*. One high quality randomized or quasi-experimental group design study and three high quality single subject design studies conducted by at least three different investigators or research groups (across the group and single subject design studies).

*Nathan & Gorman (2002)*
*Rogers & Vismara (2007)*
<table>
<thead>
<tr>
<th>Evidence-Based Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antecedent-based Intervention (ABI)</td>
</tr>
<tr>
<td>Cognitive Behavioral Intervention (CBI)*</td>
</tr>
<tr>
<td>Differential Reinforcement of Alternative, Incompatible, or Other Behavior (DRA/I/O)</td>
</tr>
<tr>
<td>Discrete Trial Teaching (DTT)</td>
</tr>
<tr>
<td>Exercise (ECE)*</td>
</tr>
<tr>
<td>Extinction (EXT)</td>
</tr>
<tr>
<td>Functional Behavior Assessment (FBA)</td>
</tr>
<tr>
<td>Functional Communication Training (FCT)</td>
</tr>
<tr>
<td>Modeling (MD)*</td>
</tr>
<tr>
<td>Naturalistic Intervention (NI)</td>
</tr>
<tr>
<td>Parent-implemented Intervention (PII)</td>
</tr>
<tr>
<td>Peer-mediated Instruction and Intervention (PMII)</td>
</tr>
<tr>
<td>Picture Exchange Communication System (PECS)</td>
</tr>
<tr>
<td>Pivotal Response Training (PRT)</td>
</tr>
<tr>
<td>Prompting (PP)</td>
</tr>
<tr>
<td>Reinforcement (R+)</td>
</tr>
<tr>
<td>Response Interruption/Redirection (RIR)</td>
</tr>
<tr>
<td>Scripting (SC)*</td>
</tr>
<tr>
<td>Self-management (SM)</td>
</tr>
<tr>
<td>Social Narratives (SN)</td>
</tr>
<tr>
<td>Social Skills Training (SST)*</td>
</tr>
<tr>
<td>Previously Social Skills Groups</td>
</tr>
<tr>
<td>Structured Play Group (SPG)*</td>
</tr>
<tr>
<td>Task Analysis (TA)</td>
</tr>
<tr>
<td>Technology-aided Instruction and Intervention (TAII)*</td>
</tr>
<tr>
<td>Previously</td>
</tr>
<tr>
<td>Computer Aided Instruction and Speech Generating Devices</td>
</tr>
<tr>
<td>Time Delay (TD)</td>
</tr>
<tr>
<td>Video Modeling (VM)</td>
</tr>
<tr>
<td>Visual Support (VS)</td>
</tr>
</tbody>
</table>
OVERVIEW:
A general description of the practice and how it can be used with learners with autism spectrum disorders.

STEP-BY-STEP DIRECTIONS FOR IMPLEMENTATION:
Explicit step-by-step directions detailing exactly how to implement a practice, based on the research articles identified in the evidence base.

IMPLEMENTATION CHECKLIST:
The implementation checklist offers a way to document the degree to which practitioners are following the step-by-step directions for implementation, which are based on the research articles identified in the evidence base.

EVIDENCE BASE:
The list of references that demonstrate that the practice is efficacious and meets the National Professional Development Center’s criteria for being identified as an evidence-based practice.
Overview of Video Modeling


Video modeling is a mode of teaching that uses video recording and display equipment to provide a visual model of the targeted behavior or skill. Types of video modeling include basic video modeling, video self-modeling, point-of-view video modeling, and video prompting. **Basic video modeling** involves recording someone besides the learner engaging in the target behavior or skill (i.e., models). The video is then viewed by the learner at a later time. **Video self-modeling** is used to record the learner displaying the target skill or behavior and is reviewed later. **Point-of-view video modeling** is when the target behavior or skill is recorded from the perspective of the learner. **Video prompting** involves breaking the behavior skill into steps and recording each step with incorporated pauses during which the learner may attempt the step before viewing subsequent steps. Video prompting may be done with either the learner or someone else acting as a model.

Evidence

Video modeling meets evidence-based practice (EBP) criteria with eight single-subject studies.

**With what ages is video modeling effective?**

The evidence-based research suggests that video modeling can be effectively implemented with learners from early childhood through middle school. This practice may prove useful with high school age learners as well, though no studies were identified to support its use at this age level.

**What skills or intervention goals can be addressed by video modeling?**

In the evidence-based studies, the domains of communication, social, academic/cognitive, and functional are addressed.
# Module: Picture Exchange Communication System (PECS)
## Implementation Checklist for PECS

<table>
<thead>
<tr>
<th>Phase 1. Teaching the Physically-Assisted Exchange</th>
<th>Yes</th>
<th>No</th>
<th>*NA</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The teacher/practitioner arranges the training environment by providing one picture at a time, positioning the communicative partner appropriately, and displaying the reinforcer in view of the learner.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The communicative partner (e.g., peer, other practitioner) entices the learner by interacting with the reinforcer (e.g., eating food, playing with toy).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The communicative partner uses an open-hand prompt as a signal to the learner to begin the communicative exchange.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. As the learner reaches toward the desired item, the teacher/practitioner interrupts the reach, re-directing the learner to pick up the picture/symbol.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Explore Modules Covering a Variety of Topics

AIM is designed to provide high-quality information and professional development for anyone who supports, instructs, works with, or lives with someone with autism. Each module guides you through case studies, instructional videos, pre- and post-assessments, a glossary, and much more. AIM modules are available at no cost. If you would like to receive credit for completing the modules, certificate and credit options are available for a fee.
Introduction
About the program

- Citywide ASD Program
- K-1\textsuperscript{st} graders with ASD
- Federal Setting I –III kids
- 7 boys integrated for parts of the day into a 1\textsuperscript{st} grade classroom (due to staffing levels)
Video modeling for Social Skills

- We focused on social skill development
- We looked at the environment to see what was setting our kids apart
- We chose social skills in which the student had the prerequisite skills (i.e. language, ability to follow a task list, imitation)
Meet Eli

Video 1
Initiating with peers

- Where do other kids initiate with peers?
  - Classroom
  - Lunchroom
  - Play
  - Recess

- Where, how, and how much do our students initiate with peers?
## Baseline Data

### Data on Eli’s initiations

<table>
<thead>
<tr>
<th>Environment</th>
<th>Number of Initiations</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play</td>
<td>0</td>
<td>Solitary play</td>
</tr>
<tr>
<td>Classroom</td>
<td>0</td>
<td>Off task</td>
</tr>
<tr>
<td>Lunchroom</td>
<td>0</td>
<td>Self talk</td>
</tr>
</tbody>
</table>
Target Behaviors Identified for Eli

- 1. commenting to peers in play
- 2. greeting peers
- 3. initiating to peers at lunch

<table>
<thead>
<tr>
<th>Environment</th>
<th>Number of Initiations</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments in Play</td>
<td>0</td>
<td>Solitary play</td>
</tr>
<tr>
<td>Greet Peers</td>
<td>0</td>
<td>Off task</td>
</tr>
<tr>
<td>Initiate to Peers at Lunch</td>
<td>0</td>
<td>Self talk</td>
</tr>
</tbody>
</table>
Planning interventions

- Visual supports were initially put in place prior to implementing a video modeling intervention.

- We determined Eli had not made enough progress using visual supports only.
Improving Interventions

- New phase of interventions were developed using self monitoring tools and video modeling for each of the target behaviors
- Interventions were conducted simultaneously
- Materials needed to implement the interventions were identified and attained
Video modeling Equipment

- Pick up a flip camera for as little as $50
- Figure out how to connect to computer
- Software is in the flip camera and will load when you connect it
- Software includes (low level) editing tools
- Save in folders and backup source
- Get comfortable using the technology!
Self Monitoring paired with Visual Supports

- Self monitoring tools were designed to support video modeling
- Visuals were used to developed the self monitoring tools
- The tools provide closure to performance of skill
- Student manages the tool independently
Intervention 1: Comment to Peers in Play Planning

What
- Content was determined based on task analysis (what will be done and said specifically)
- Use toys he prefers
- Task Analysis of Comment to Peers
  - Sit near kids on the choice rug
  - Take phrase strip out of the left bucket
  - Read the phrase to peer
  - “Wow, you are ______”, “You have the_______”, “I see the ______”
  - Put phrase strip into all-done bucket on the right
  - Repeat for 8 remaining phrase strips
Intervention 1: Comment to Peers in Play Planning

- **Who**
  - Videotape a peer if Eli does not show the skill
  - Use peer that is similar to him or that he likes/knows
  - Video peer who can read and use self-monitoring tools

- **Where**
  - Video in same or similar environment in which the student needs to perform the skill
  - Videotaped Rose in play area on the choice rug with preferred toys

[Video 4]
Intervention 1: Comment to Peers in Play

Implementation

- **Watch the video**
  - Before the first time watching the video, we provided him with general instructions such as, “Eli, you are going to be talking to friends when you are playing and we are going to watch a video to show you how to do it.”
  - We determined a specific time for Eli to watch the video and put it in his schedule.
  - For this skill, we determine that having Eli watch the video just prior to a play session on the choice rug was best.
  - Eli watched the video several times prior to being asked to perform the skill.
Intervention 1: Comment to Peers in Play Implementation

- **Perform the Skill**
  - The self monitoring phrase strips were in front of him as he watched the video to prepare for skill performance.
  - Materials were in place just as seen in the video for Eli when it was time for him to perform the skill.

[Video 6]
[Video 7]
Other things I say to friends

- helicopter
- Oh no
- If I can’t see the train, maybe I can see the tracks.
- We have to get more tracks.
- Look, that thing is long.
- It’s a crane.
- I did not go sledding.
- No, Dad came early.
- A station, another station.
- That’s not a ladder.
- Hah, I told you it’s not a ladder.
- The sheds go in 1 place.

12 times talked to friends
+ 8 of my phrases
20 times talked to friends—Yeah!
Intervention 1: Comment to Peers in Play
Intervention 1: Comment to Peers in Play
Fade & Troubleshoot

- Analyzed the video with Eli and assisted him in attending to his phrases and wrote down additional non-scripted phrases he used.

- Because he expanded to phrases beyond the phrase strips, the strips became cumbersome and interrupted his play.

- Faded to masking tape with the word “talk” on it.
Fading to talk cue
Intervention 2: Greet Peers
Planning

What
- Content was determined based on task analysis

- Task Analysis of Greeting Peer
  - Walk into the classroom
  - Go to your desk
  - Put 3 pieces of tape on your left arm
  - Walk up to peer and say hi
  - Walk back to desk and place tape on all done box
  - Repeat with 2 other peers
Intervention 2: Greet Peers
Planning

Who?

- Videotaped peer because Eli does not show the skill
- Used peer that he knows and likes
- Videotaped a peer who is already using the skill with self monitoring supports

Where?

- Videotaped Jack greeting peers in the general education classroom

Video 8
Intervention 2: Greet Peer Implementation

- Watch the Video
  - General instructions were given prior to watching the video, “Eli, you are working on saying hi to friends and we are going to watch how to do it.”
  - We determined a specific time for Eli to watch the video and put it in his schedule
  - Eli watched the video just prior to entering the general education classroom in the morning
  - First Eli watched the video several times with the teacher pointing out the important details
Intervention 2: Greet Peer Implementation

- Perform the Skill
  - The self monitoring visuals were in front of him as he watched the video to prepare for skill performance
  - Materials were in place just as seen in the video for Eli when it was time for him to perform the skill

Video 9
Video 10
Video 10b (optional)
Video 11
Intervention 2: Greet Peers

The graph shows the number of peers greeted over time during the intervention. The data is divided into four phases:

1. **Baseline**: The initial phase with no recorded data.
2. **VM + SM**: The peer's performance increases from 0 to 3 peers greeted.
3. **Add Compliment**: The performance plateaus at 3 peers greeted.
4. **Fade**: The performance remains at 3 peers greeted.

The x-axis represents the data days in the intervention, and the y-axis represents the number of peers greeted.
Intervention 2: Greet Peers
Fade & Troubleshoot

- Used checkmarks instead of tape
- Added compliments to greeting
- Did not have him return to desk each time
- Still watches the video because he loves it (is still part of his schedule – he is motivated by it!)
Intervention 3: Initiate to Peers at Lunch Planning

What
- Content was determined based on task analysis

Task Analysis of Initiating to Peers at Lunch
- Sit beside peers at the lunch table
- Place self-monitoring tapes on left leg
- Take off one tape phrase strip
- Read the strip to a peer and finish the phrase “Wow, you have ______”
- Place on the right leg
- Repeat for 2 more identical phrases to other peers
- Task is complete when all 3 are on the right leg
Intervention 3: Initiate to Peers at Lunch Planning

Who?

- Videotaped peer because Eli does not show the skill
- Used peer that he knows and likes
- Videotaped a peer who is already using the skill with self monitoring supports

Where?

- Videotaped Rose initiating same phrases
- Attempted to videotape in the lunchroom but it was too loud
- Designed a pretend lunchtable with plastic food in the resource room
Intervention 3: Initiate to Peers at Lunch
Implementation

- Watch the Video
  - General instructions were given prior to watching the video, “*Eli, you are going to talk to your friends at lunch. We are going to watch a video and use these pieces of tape to help you do this.*”
  - We determined a specific time for Eli to watch the video and put it in his schedule
  - Eli watched the video just prior to entering the lunchroom at lunch
  - First Eli watched the video 2 times with the teacher pointing out the important details
Intervention 3: Initiate to Peers at Lunch

Implementation

- Perform the Skill
  - The tape phrase strips were in front of him as he watched the video to prepare for skill performance.
  - Materials were in place just as seen in the video for Eli when it was time for him to perform the skill.

Video 14  Video 15  Video 16  Video 17
Intervention 3: Initiate to Peers at Lunch
Intervention 3: Initiate to Peers at Lunch
Fade & Troubleshoot

• Add 2\textsuperscript{nd} phrase
  “What are you going to do at recess?”

• Fade phrases to one word

• Mix one word phrases to be performed in the same lunch period

• Add 3\textsuperscript{rd} and 4\textsuperscript{th} phrases
  “What are you going to do this weekend?” (Friday)
  “What did you do this weekend?” (Monday)
Intervention 3: Initiate to Peers at Lunch

Generalization

- Before the lunchroom intervention, Eli had 0 or 1 comments in a 12 minute lunch (with an average of 6 self talks per day)

- Currently, he averages 7.6 phrases beyond the taught phrases with no cues

- Currently, in 17/20 days has had no self talks
My Friend, Eli

Video 18
Before

Video 19
After
What we learned...

- Kids love video modeling! They were interested and enthusiastic to see themselves in action!
- Kids did much better and learned faster than with a social skills curriculum
- I needed to reduce my talking on the videos
- It doesn’t have to be pretty, it just has to work
Carefully matching interventions for specific skills is key in maximizing student progress.

The ability to instruct the students by pausing the video (stopping the action) was critical.

A combination of EPBs worked best.

Video modeling is easily carried over to the home and community environments.

It was fun to see my kids excited about learning social skills!
Thank you!

Contact information:

michele.glynn@mpls.k12.mn.us
michele.glynn@mpls.k12.mn.us

Tami Childs

NPDC-ASD Website:
http://autismmpdc.fpg.unc.edu/

AIM Website:
autisminternetmodules.org

MN Professional Development Module on Video Modeling:
metroecsumoodle.org