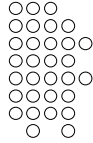


## Video Modeling: What, Why, Who, and How?

BC-ABA Conference  
Vancouver, BC  
March 7, 2009

Presenters: Pat Mirenda, Ph.D., BCBA  
and Liana Maione, M.A., BCBA



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### Video modeling: What???

- Student views a videotape of a model engaging in a desired behavior and subsequently imitates the model
- Has been used with individuals with autism to teach skills such as
  - Social initiations, requesting, responding, and conversational exchanges with adults (Charlop & Milstein, 1989; Nikopoulos & Keenan, 2004; Wert & Neisworth, 2003)
  - Play-related statements with siblings (Taylor, Levin, & Jasper, 1999)
  - Solitary, pretend play (D'Ateno, Mangiapanello, & Taylor, 2003; MacDonald, Clark, Garrigan, & Vangalla, 2005)
  - Perspective-taking/theory of mind (Charlop-Christy & Daneshvar, 2003)



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### Video modeling: What???

- Video modeling appears to work at least as well as -- and sometimes better than -- live modeling (Charlop-Christy, Le, & Freeman, 2000)
- Adult and peer models appear to work as well as self-models (Bellini & Akullian, 2007; McCoy & Hermansen, 2008; Scherer et al., 2001)
  - Both familiar and unfamiliar adults and peers have been used, with more research on familiar



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### Video modeling: Why???



- Students with autism (and other disabilities) often enjoy watching videos and often model what they see
- Video technology is increasingly cheap, easy-to-use, and available
- Can be used to teach home skills at school and school skills at home
- It is an *evidence-based practice*

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### Evidence-based practice



- Bellini & Akullian (2007) located 29 studies done with individuals with autism, 23 of which met their criteria for sound research (1987-2005)
  - 61% of the studies were conducted in school settings
- They used a metric called the “percentage of non-overlapping data” (PND) to rate the studies’ effectiveness
- They found a mean PND of 80%, indicating that video modeling is “effective” (but not *very effective*), with moderate-high generalization and maintenance effects

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### Video modeling: Who???



- Bellini & Akullian (2007) reviewed the research on video modeling in school-aged children with ASD between 3 and 21; most were effective
- VM has also been implemented successfully to teach individuals with (for example)
  - Mild-severe intellectual disabilities (e.g., Norman, Collins, & Schuster, 2001; Rehfeldt, Dahman, Young, Cherry, & Davis, 2003; Sigafoos et al., 2005)
  - Brain injury (McGraw-Hunter, Faw, & Davis, 2006)
  - Persons with chronic obstructive lung disease (Ng, Tam, Yew, & Lam, 1999)
  - Spina bifida (King et al., 1997)

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## Video modelling: How???



1. Identify the *activity-specific purpose* of the video model
  - To teach new behaviors
  - To generalize previously-acquired behaviors to new people, places, activities
2. Identify the key behaviors that are required
  - Observation (social, play, communication routines)
  - Interview (same)
  - Task analysis (self-care routines)

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## Video modelling: How???



3. Prepare one or more scripts
  - Not necessary to completely script the videos, but you should have a good idea of what the actors will do, say, etc.
  - Keep it short -- a few minutes is best!
  - Match language to the target child's
  - To encourage generalization and discourage memorization, script 2-3 versions of the same activity, if appropriate and possible
4. Find an appropriate location and props
  - Location should be well-lit with no outside noise and no distracting visual displays
  - Be sure to have all of the "props" that will be needed (toys, soap and towel, etc. etc.)

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## Video modeling: How???



5. Identify actor(s) and rehearse
  - Age, gender do not have to match the student's
  - Clear, medium-slow speaking and singing voice with animation, if relevant
  - Comfortable in front of a camera
  - Run through the task sequence once or twice to make sure the actor(s) are familiar with what you want them to do
6. Action...camera!
  - If speech is involved -- use a microphone if at all possible; if not, at least use a camera with a good built-it mike
  - Use a tripod to avoid camera shake
  - Film in as close as possible without cutting out relevant information

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## Video modeling: How???



6. Watch the video
  - Have the student watch the video model tapes at least once per day -- more often, if desired and possible
  - In research, viewing are typically scheduled 30-60 minutes before the activity, but this may not be necessary
7. Observe
  - Do the modeled behaviors occur in the target situation?
  - If not, add additional components

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## Video modeling: How???



- Additional components may include:
  - Highlighting key features of the video model tapes
  - Prompting/fading in the target situation
  - Social praise/encouragement in the target situation
  - Add one at a time, as needed



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## Ryan (Maione & Mirenda, 2006)



- Age 5;7, autism
- Had 1.5 years of intensive ABA therapy prior to kindergarten
- Speech/language skills were at a 3-yr level
- Good solitary play skills but little unprompted social language during play with peers (Jay, Pamela)

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## Videotapes



- Three, 1-min videotapes were made for each of three toy activities
  - Play doh (MacDonald's food set)
  - Chevron Cars
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- th the toys and talked to one another in

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## Intervention



- Every day, Ryan watched the three tapes for each toy one time
- He also played with each toy 2-3 times per week with a peer (Jay or Pamela) at home
  - *No prompting, reinforcement, etc. during play sessions*
- All of the play sessions were videotaped for data collection

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## Additive intervention: Chevron cars



- Ryan perseverated on the wheels of the Chevron cars for the first 5 probes in this condition
- Verbal prompting ("Ryan, what can you say to Pamela?") was added in the probe sessions to encourage him to interact; faded over 5 sessions

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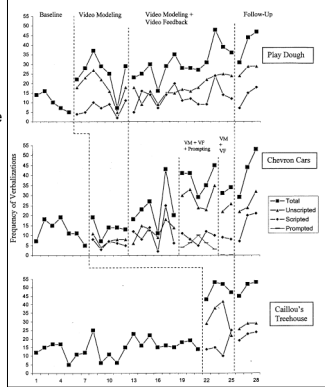
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## Results

- For 2/3 activities, no additive procedures were required
- Ryan began to use his speech to interact with peers in creative ways (unscripted)
- Ryan initiated verbal interactions more often than he responded to initiation by peers
- Parents reported excellent generalization to new toys and peers after video modeling




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## Pre-made videos

- Examples:
  - Model Me Kids: <http://www.modelmekids.com/>
  - Special Kids: <http://www.special-kids.com/video.cfm>
  - Watch Me Learn: <http://watchmelearn.com>




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## Pre-made videos

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| <ul style="list-style-type: none"> <li>• Disadvantages:                     <ul style="list-style-type: none"> <li>• Narrated</li> <li>• Generic activities</li> <li>• Language level may not be a good match</li> <li>• No empirical research, just website testimonials</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Advantages:                     <ul style="list-style-type: none"> <li>• High-quality videos</li> <li>• No time required to produce</li> <li>• Children, not adults</li> <li>• Available for activities that might be difficult to stage (e.g., birthday party, fastening seatbelt on the bus)</li> <li>• If good match to activity and child, may be effective</li> </ul> </li> </ul> |
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## Punchline



- Know what *activity-specific behaviors* are required
- Write a script and recruit actors, props
- Make 2-3 short videos with variations
- Show the videos at least once/day
- Add brief prompting, praise during “real” activities, if needed
- See what happens!

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## Selected References



- Bellini, S., & Akullian, J. (2007). A meta-analysis of video modeling and video self-modeling interventions for children and adolescents with autism spectrum disorders. *Exceptional Children, 73*, 264-287.
- Charlop, M. H., & Milstein, J. P. (1989). Teaching autistic children conversational speech using video modeling. *Journal of Applied Behavior Analysis, 22*, 275-285.
- Charlop-Christy, M. H., & Daneshvar, S. (2003). Using video modeling to teach perspective taking to children with autism. *Journal of Positive Behavior Interventions, 5*, 12-21.
- Charlop-Christy, M. H., Le L., & Freeman, K. A. (2000). A comparison of video modeling with in vivo modeling for teaching children with autism. *Journal of Autism and Developmental Disorders, 30*, 537-552.
- D'Ateno, P., Mangiapanello, K., & Taylor, B. A. (2003). Using video modeling to teach complex play sequences to a preschooler with autism. *Journal of Positive Behavior Interventions, 5*, 5-11.
- Kleeberger, V., & Mirenda, P. (in press). Teaching generalized imitation skills to a preschooler with autism using video modeling. *Journal of Positive Behavior Interventions*.

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## Selected References



- Maione, L., & Mirenda, P. (2006). Effects of video modeling on peer-directed social language skills of a child with autism. *Journal of Positive Behavior Interventions, 8*, 106-118.
- MacDonald, R., Clark, M., Garrigan, E., & Vangalla, M. (2005). Using video modeling to teach pretend play to children with autism. *Behavioral Interventions, 20*, 225-238.
- McCoy, K., & Hermansen, E. (2007). Video modeling for individuals with autism: A review of model types and effects. *Education and Treatment of Children, 30*, 183-213.
- Nikopoulos, C. K & Keenan, M. (2003). Promoting social initiation in children with autism using video modeling. *Behavioral Interventions, 18*, 87-108.
- Sherer, M., Pierce, K. L., Paredes, S., Kisacky, K. L., Ingersoll, B., & Schreibman, L. (2001). Enhancing conversation skills in children with autism via video technology. *Behavior Modification, 25*, 140-159.
- Taylor, B. A., Levin, L., & Jasper, S. (1999). Increasing play-related statements in children with autism toward their siblings: Effects of video modeling. *Journal of Developmental and Physical Disabilities, 11*, 253-264.
- Wert, B. Y., & Neisworth, J. T. (2003). Effects of video self-modeling on spontaneous requesting in children with autism. *Journal of Positive Behavior Interventions, 5*, 30-34.

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