



Using Videomodeling to Teach Motor Skills to Individuals with Autism Spectrum Disorders

Iva Obrusnikova, Ph.D., CAPE
 University of Delaware
 Behavioral Health & Nutrition
 302-831-8032
 obrusnik@udel.edu




Physical Activity & ASD

- Regular PA is important for a child's health, sense of well-being, self-esteem, and maintenance of a healthy body weight.
- Children with ASD do not engage in sufficient amounts of PA (Pan & Frey, 2006).
- Proficiency in motor skills promotes a child's perceived confidence and engagement in PA
- What methods can we use to increase their PA?




What is Videomodeling?



- Images of an athlete, an adult, or the teacher
- Images of an older student from the school
- Images of a same-aged peer
- Images of oneself

3




Benefits of Videomodeling

- Improves attention and appropriate behavior
- Supports skill proficiency and play development
- Strengthen beliefs in one's capability
- Increases positive movement opportunities
- Increases independence while completing a task
- Teaches communication and reduces anxiety
- Allows assessment of PLOP and student progress

(Baker, Lang, & O'Reilly, 2009; Cardon & Wilcox, 2011; Charlop-Christy et al., 2000; Corbett, 2003; Nikopoulos & Keenan, 2003; O'Reilly et al., 2005)


4



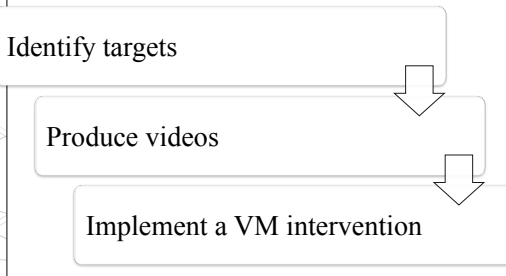
Conditions of Videomodeling

- Bandura (1997):
 - Attention – paying attention to the skill cues
 - Retention – remembering the skill cues
 - Production – reproducing the skill cues
 - Motivation – having a reason to imitate the skill cues

5




Steps when Using Videomodeling



6


Step 1: Identify Targets

- Who is your learner? – PLOP
- Develop baseline data
- Learners' strengths and preferences
 - Types of VM techniques
 - Technology proficiency




Step 2: Produce Videos

- Create 3-5 videos of the same skill
 - Vary settings and models for generalization
- Scaffold skills through camera point of view
- Use typical developing peers to judge video
- Refer to curriculum or grade level outcomes
- Edit videos from 15 seconds up to 3 minutes



Keep your knees bent.





Finger tips on the ball; palm like a cup

Step 3: Implement the VM Intervention

- Embed VM in class routines
- View VM in consistent setting
- View each of the 3-5 videos prior to engaging in the targeted skill
- Practice the skill in a natural setting
- Collect same type of data as baseline
- Reinforce generalization to self-monitor

Mediums Used for Videomodeling


- TV and VCR/DVD player
- A laptop computer
- Digital camcorders or flip cameras
- Handheld computers (DynaVox Maestro/X PDAs, iPods, iPads)

11





Why iPad/iPod for Videomodeling?

- Efficient and cost-effective tool
- Ever-growing and developing software
- Highly visual, auditory, and kinesthetic
- Accommodates individual learning styles
- Provides mobility, independence, and simulation
- An instant availability and immediate feedback
- Engaging, fun, motivational, and rewarding



12

Apps for Video Editing (iPad/iPod)

	Splice \$3.99	Splice together HD photos and videos in an amazingly simple way. Add music tracks from your iPod library, sound effects, transitions, borders, effects (like Ken Burns, slow motion and fast forward), trim video and audio, narrate with your own voice, and much more.
	iMovie \$4.99	Designed for the Multi-Touch screen, iMovie puts everything you need to tell your story at your fingertips. Browse and play projects in the Marquee view. Make a movie in minutes by adding video, photos, music and sound effects.
	Coaches' Eye \$4.99	Shoot video with the recorder or drop video in from other Apps. Analyze the video in slow motion or fast speeds. Pause video at specific moments and use drawing tools to emphasize body positions. Save analysis and share with others.
	Avid \$4.99	More functional than iMovie but also more difficult. You can cut audio.

13

Example of Video-Self Modeling Soccer Trapping




14

Example of Video-Peer Modeling Push Ups




15

Do you see the difference?




Push Up By Jonathan




Push Up By Ben

Which push up is better?



Push up 1




Push up 2

16

VM for Assessment & Evaluation

- Record performance
- Watch the skill
- Assess the skill with a skill checklist
- Switch roles



17

Challenges with Videomodeling

- Distractions recorded in the background
- Some learners do not want to be videotaped
- Some parents may not want their children videotaped
- Technology approval process
- Prerequisite skills to create videos
- Challenge to record psychomotor skills at the right moment
- Lengthy time process
- Using technology may increase sedentary activities

18