AFIRM
Autism Focused Intervention Resources & Modules

Video Modeling (VM)
---EBP Brief Packet---

This overview brief will support your use of the evidence-based practice: Video Modeling.

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Components of the EBP Brief Packet…

This evidence-based practice overview on Video Modeling includes the following components:

1. **Overview:** A quick summary of salient features of the practice, including what it is, who it can be used with, what skills it has been used with, and settings for instruction.
2. **Evidence-base:** The *VM Evidence-base* details the NPDC criteria for inclusion as an evidence-based practice and the specific studies that meet the criteria for this practice.
3. **Step-by-Step Guide:** Use the *VM Step-by-Step Practice Guide* as an outline for how to plan for, use, and monitor VM. Each step includes a brief description as a helpful reminder while learning the process.
4. **Implementation Checklist:** Use the *VM Implementation Checklist* to determine if the practice is being implemented as intended.
5. **Data Collection Sheets:** Use the data collection sheets as a method to collect and analyze data to determine if progress is being made for a learner with ASD.
6. **Tip Sheet for Professionals:** Use the *VM Tip Sheet for Professionals* as a supplemental resource to help provide basic information about the practice to professionals working with the learner with ASD.
7. **Parent Guide:** Use the *VM Parent Guide* to help parents or family members understand basic information about the practice being used with their child.
8. **Additional Resources:** Use the *Additional Resources* to learn more about the practice.
9. **CEC Standards:** A list of *CEC Standards* that apply specifically to VM.
10. **Module References:** A list of numerical *References* utilized for the VM module.

Suggested citation:

Cox, A., & AFIRM Team. (2018). *Video Modeling*. Chapel Hill, NC: National Professional Development Center on Autism Spectrum Disorders, FPG Child Development Center, University of North Carolina. Retrieved from http://afirm.fpg.unc.edu/video-modeling

Video Modeling (VM)

What Is Video Modeling?

Video modeling (VM) is an intervention that uses technology (video recording and display equipment) to provide a visual model of a targeted behavior or skill. Thus, it is often referred to as an assistive technology method. Often, VM is combined with prompting and reinforcement to maximize the viewer's (learner's) ability to apply what they have seen. VM can be used as a stand-alone instructional practice or in combination with other evidence-based practices such as self-management, social skills training, or social narratives.

Evidence-base

Video modeling meets the evidence-based practice criteria set by NPDC with 31 single case design studies and 1 group design study. The practice has been effective for early intervention (0-2 years) to high school-age learners (15-22 years) with ASD. Evidence-based practices (EBP) and studies included in the 2014 EBP report detailed how video modeling can be used effectively to address: social, communication, joint attention, behavior, school readiness, play, cognitive, motor, adaptive, vocational, and academic outcomes.

How Is VM Being Used?

Video modeling has become increasingly popular as a way to teach a wide range of skills to persons with ASD, such as social responding, play, requesting, performing, and/or motor skills.

VM can be used by a variety of professionals including teachers, special educators, therapists, paraprofessionals, and early interventionists in educational and community-based environments. Parents and family members also can use video modeling in the home and in the community.

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---Evidence-base for Video Modeling---

The National Professional Development Center on ASD has adopted the following criteria to determine if a practice is evidence-based. The EBP Report provides more information about the review process (Wong et al., 2014).

Efficacy must be established through high quality, 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)].

--OVERVIEW--

By using video modeling (VM), the learner with ASD might be able to process information easier and more quickly. Video modeling meets the evidence-based practice criteria with 31 single case design studies and 1 group design study. The practice has been effective with learners in early intervention (0-2 years) to high school learners (15-22 years). Studies included in the 2014 EBP report detailed how video modeling can be used effectively to address: social, communication, joint attention, behavior, school readiness, play, cognitive, motor, adaptive, vocational, and academic outcomes.

In the table below, the outcomes identified by the evidence base are shown by age of participants.

Early Intervention (0-2)	Preschool (3-5)	Elementary (6-11)	Middle (12-14)	High (15-22)
	Social	Social	Social	Social
Communication	Communication	Communication		
	Joint Attention	Joint Attention		
		Behavior	Behavior	
	School-Readiness	School-Readiness	School-Readiness	
Play	Play	Play	Play	Play
		Cognitive		
	Motor			
	Adaptive	Adaptive	Adaptive	Adaptive
		Vocational	Vocational	Vocational
	Academic	Academic		

Early intervention (0-2 years)

*Hine, J. F., & Wolery, M. (2006). Using point-of-view video modeling to teach play to preschoolers with autism. *Topics in Early Childhood Special Education, 26*(2), 83-93. doi: 10.1177/02711214060260020301

*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*(3), 253-264. doi: 10.1023/A:1021800716392

Preschool (3-5 years)

Apple, A. L., Billingsley, F., Schwartz, I. S., & Carr, E. G. (2005). Effects of video modeling alone and with self-management on compliment-giving behaviors of children with high-functioning ASD. *Journal of Positive Behavior Interventions, 7*(1), 33-46. doi: 10.1177/10983007050070010401

Buggey, T., Hoomes, G., Sherberger, M. E., & Williams, S. (2011). Facilitating social initiations of preschoolers with autism spectrum disorders using video self-modeling. *Focus on Autism and Other Developmental Disabilities, 26*(1), 25-36. doi: 10.1177/1088357609344430

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*(1), 5-11. doi: 10.1177/10983007030050010801

*Hine, J. F., & Wolery, M. (2006). Using point-of-view video modeling to teach play to preschoolers with autism. *Topics in Early Childhood Special Education, 26*(2), 83-93. doi: 10.1177/02711214060260020301

Kleeberger, V., & Mirenda, P. (2010). Teaching generalized imitation skills to a preschooler with autism using video modeling. *Journal of Positive Behavior Interventions, 12*(2), 116-127. doi: 10.1177/1098300708329279

Maione, L., & Mirenda, P. (2006). Effects of video modeling and video feedback on peer-directed social language skills of a child with autism. *Journal of Positive Behavior Interventions, 8*(2), 106-118.

*Marcus, A., & Wilder, D. A. (2009). A comparison of peer video modeling and self video modeling to teach textual responses in children with autism. *Journal of Applied Behavior Analysis, 42*(2), 335-341. doi: 10.1901/jaba.2009.42-335

*Plavnick, J. B., & Ferreri, S. J. (2011). Establishing verbal repertoires in children with autism using function - based video modeling. *Journal of Applied Behavior Analysis, 44(*4), 747-766. doi: 10.1901/jaba.2011.44-747

*Reeve, S. A., Reeve, K. F., Townsend, D. B., & Poulson, C. L. (2007). Establishing a generalized repertoire of helping behavior in children with autism. *Journal of Applied Behavior Analysis, 40*(1), 123-136. doi: 10.1901/jaba.2007.11-05

*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: Which is better, "self" or "other" as a model? *Behavior Modification, 25*(1), 140-158. doi: 10.1177/0145445501251008

Preschool (3-5 years continued)

*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*(3), 253-264. doi: 10.1023/A:1021800716392

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*(1), 30-34.

Elementary (6-11 years)

Akmanoglu, N., & Tekin-Iftar, E. (2011). Teaching children with autism how to respond to the lures of strangers. *Autism, 15*(2), 205-222. doi: 10.1177/1362361309352180

Buggey, T., Toombs, K., Gardener, P., & Cervetti, M. (1999). Training responding behaviors in students with autism using videotaped self-modeling. *Journal of Positive Behavior Interventions, 1*(4), 205-214. doi: 10.1177/109830079900100403

Cannella-Malone, H. I., Fleming, C., Chung, Y. C., Wheeler, G. M., Basbagill, A. R., & Singh, A. H. (2011). Teaching daily living skills to seven individuals with severe intellectual disabilities: A comparison of video prompting to video modeling. *Journal of Positive Behavior Interventions, 13*(3), 144-153. doi: 10.1177/1098300710366593

Charlop-Christy, M. H., & Daneshvar, S. (2003). Using video modeling to teach perspective taking to children with autism. *Journal of Positive Behavior Interventions, 5*(1), 12-21. doi: 10.1177/10983007030050010101

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*(6), 537-552. doi: 10.1023/A:1005635326276

Charlop, M. H., Dennis, B., Carpenter, M. H., & Greenberg, A. L. (2010). Teaching socially expressive behaviors to children with autism through video modeling. *Education and Treatment of Children, 33*(3), 371-393. doi: 10.1353/etc.0.0104

Cihak, D., Fahrenkrog, C., Ayres, K. M., & Smith, C. (2010). The use of video modeling via a video iPod and a system of least prompts to improve transitional behaviors for students with autism spectrum disorders in the general education classroom. *Journal of Positive Behavior Interventions, 12*(2), 103-115. doi: 10.1177/1098300709332346

Cihak, D. F. (2011). Comparing pictorial and video modeling activity schedules during transitions for students with autism spectrum disorders. *Research in Autism Spectrum Disorders, 5*(1), 433-441. doi: 10.1016/j.rasd.2010.06.006

Coyle, C., & Cole, P. (2004). A videotaped self-modelling and self-monitoring treatment program to decrease off-task behaviour in children with autism. *Journal of Intellectual and Developmental Disability, 29*(1), 3-16. doi: 10.1080/08927020410001662642

Elementary (6-11 years continued)

Haring, T. G., Breen, C. G., Weiner, J., Kennedy, C. H., & Bednersh, F. (1995). Using videotape modeling to facilitate generalized purchasing skills. *Journal of Behavioral Education, 5*(1), 29-53. doi: 10.1007/BF02110213

Kroeger, K. A., Schultz, J. R., & Newsom, C. (2007). A comparison of two group-delivered social skills programs for young children with autism. *Journal of Autism and Developmental Disorders, 37*(5), 808-817. doi: 10.1007/s10803-006-0207-x

LeBlanc, L. A., Coates, A. M., Daneshvar, S., Charlop - Christy, M. H., Morris, C., & Lancaster, B. M. (2003). Using video modeling and reinforcement to teach perspective - taking skills to children with autism. *Journal of Applied Behavior Analysis, 36*(2), 253-257. doi: 10.1901/jaba.2003.36-253

*Marcus, A., & Wilder, D. A. (2009). A comparison of peer video modeling and self video modeling to teach textual responses in children with autism. *Journal of Applied Behavior Analysis, 42*(2), 335-341. doi: 10.1901/jaba.2009.42-335

Marzullo - Kerth, D., Reeve, S. A., Reeve, K. F., & Townsend, D. B. (2011). Using multiple - exemplar training to teach a generalized repertoire of sharing to children with autism. *Journal of Applied Behavior Analysis, 44*(2), 279-294. doi: 10.1901/jaba.2011.44-279

Nikopoulos, C. K., Canavan, C., & Nikopoulou-Smyrni, P. (2009). Generalized effects of video modeling on establishing instructional stimulus control in children with autism results of a preliminary study. *Journal of Positive Behavior Interventions, 11*(4), 198-207. doi: 10.1177/1098300708325263

*Nikopoulos, C. K., & Keenan, M. (2003). Promoting social initiation in children with autism using video modeling. *Behavioral interventions, 18*(2), 87-108. doi: 10.1002/bin.129

Nikopoulos, C. K., & Keenan, M. (2004). Effects of video modeling on social initiations by children with autism. *Journal of Applied Behavior Analysis, 37*(1), 93-96. doi: 10.1901/jaba.2004.37-93

Nikopoulos, C. K., & Keenan, M. (2007). Using video modeling to teach complex social sequences to children with autism. *Journal of Autism and Developmental Disorders, 37*(4), 678-693. doi: 10.1007/s10803-006-0195-x

*Plavnick, J. B., & Ferreri, S. J. (2011). Establishing verbal repertoires in children with autism using function - based video modeling. *Journal of Applied Behavior Analysis, 44*(4), 747-766. doi: 10.1901/jaba.2011.44-747

Rayner, C. (2011). Teaching students with autism to tie a shoelace knot using video prompting and backward chaining. *Developmental Neurorehabilitation, 14*(6), 339-347. doi: 10.3109/17518423.2011.606508

*Reeve, S. A., Reeve, K. F., Townsend, D. B., & Poulson, C. L. (2007). Establishing a generalized repertoire of helping behavior in children with autism. *Journal of Applied Behavior Analysis, 40*(1), 123-136. doi: 10.1901/jaba.2007.11-05

Elementary (6-11 years continued)

*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: Which is better, "self" or "other" as a model? *Behavior Modification, 25*(1), 140-158. doi: 10.1177/0145445501251008

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*(1), 30-34.

Middle (12-14 years)

Cannella-Malone, H. I., Fleming, C., Chung, Y. C., Wheeler, G. M., Basbagill, A. R., & Singh, A. H. (2011). Teaching daily living skills to seven individuals with severe intellectual disabilities: A comparison of video prompting to video modeling. *Journal of Positive Behavior Interventions, 13*(3), 144-153. doi: 10.1177/1098300710366593

Cihak, D. F. (2011). Comparing pictorial and video modeling activity schedules during transitions for students with autism spectrum disorders. *Research in Autism Spectrum Disorders, 5*(1), 433-441. doi: 10.1016/j.rasd.2010.06.006

Haring, T. G., Breen, C. G., Weiner, J., Kennedy, C. H., & Bednersh, F. (1995). Using videotape modeling to facilitate generalized purchasing skills. *Journal of Behavioral Education, 5(*1), 29-53. doi: 10.1007/BF02110213

LeBlanc, L. A., Coates, A. M., Daneshvar, S., Charlop - Christy, M. H., Morris, C., & Lancaster, B. M. (2003). Using video modeling and reinforcement to teach perspective - taking skills to children with autism. *Journal of Applied Behavior Analysis, 36*(2), 253-257. doi: 10.1901/jaba.2003.36-253

Nikopoulos, C. K., & Keenan, M. (2003). Promoting social initiation in children with autism using video modeling. *Behavioral interventions, 18*(2), 87-108. doi: 10.1002/bin.129

High (15-22 years)

Allen, K. D., Wallace, D. P., Greene, D. J., Bowen, S. L., & Burke, R. V. (2010). Community-based vocational instruction using videotaped modeling for young adults with autism spectrum disorders performing in air-inflated mascots. Focus on *Autism and Other Developmental Disabilities, 25*(3), 186-192. doi: 10.1177/1088357610377318

Haring, T. G., Breen, C. G., Weiner, J., Kennedy, C. H., & Bednersh, F. (1995). Using videotape modeling to facilitate generalized purchasing skills. *Journal of Behavioral Education, 5*(1), 29-53. doi: 10.1007/BF02110213

*Nikopoulos, C. K., & Keenan, M. (2003). Promoting social initiation in children with autism using video modeling. *Behavioral interventions, 18*(2), 87-108. doi: 10.1002/bin.129

* Research which included participants in multiple age ranges.

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Video Modeling (VM)
---Step-by-Step Guide---

This practice guide outlines how to plan for, use, and monitor the practice of video modeling.

Keep in mind that the four types of video modeling are:

- Basic video modeling
- Video self-modeling
- Point –of-view video modeling
- Video prompting

While each procedure is slightly different, the practice guide is applicable to all. When unique features are tied to a specific category, we will identify them through examples or cautions.

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BEFORE YOU START…

Each of the following points is important to address so that you can be sure the selected EBP is likely to address the learning needs of your student.

Have you found out more information about. . .?

- ☐ Identified the behavior…
- ☐ Collected baseline data through direct observation…
- ☐ Established a goal or outcome that clearly states when the behavior will occur, what the target skill is, and how the team will know when the skill is mastered…

If the answer to any of these is "no," review the process of how to select an EBP.

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Now you are ready to start…

Step 1: VM Planning

The planning step explains how to choose the best type of video modeling to address the student's needs, how to create the video, and when and where to use video modeling.

1.1 Determine if learner has needed skills

In order to learn from a model, a learner must be able to:

- Imitate others' behaviors,
- Perform some of the component skills that make up the target skill, and
- Sustain attention long enough to watch the model perform the target skill.

1.2 Choose the type of VM to use to address the behavior/skill

Often there will be more than one type of video modeling that will fit your student learning needs. Be sure you understand the four basic types, what is required of the learner and the instructor, and what outcome you plan for the student to achieve so that you can choose the best VM type for the situation.

1.3 Simplify the task into smaller skills, if needed

Consider breaking down a skill or task that is too large into smaller pieces or sub-tasks. You may want to complete a task analysis of the larger skill and model each part separately using video prompting.

Note: For more information on task analysis, please visit the Task Analysis module.

1.4 Select reinforcers to pair with the target skill or behavior

A reinforcement assessment can be helpful in allowing the learner (of any age) to select those items that are most motivating and reinforcing.

Note: For more information on identifying reinforcers, please visit the Reinforcement module.

Use the VM Reinforcer Checklist to help you identify reinforcers.

1.5 Choose the video equipment

There are three specific equipment functions that may be needed in order to use video modeling as an effective intervention. These include (1) equipment to *Record* the behavior or skill, (2) software to *Edit* the video once it is recorded (if necessary), and (3) a device for the learner to *View* the video model.

Use the VM Equipment Checklist to help you identify functions of available technologies.

Step 1: VM Planning (continued)

1.6 Create the model and record the video

- Identify and prepare the model
- Arrange the environment for recording the video
- Record the video
- Edit the video
- Transfer the video to a viewing device

1.7 Introduce the viewing equipment to the learner, as needed

With some young children or students unfamiliar with watching videos, you will need to introduce the viewing equipment and give them a chance to manipulate and watch a video.

1.8 Train team members to implement the VM with fidelity

It is important to train these individuals in how to use the intervention with fidelity, much as you have learned to do. You can ask these individuals to review the *Step-by-Step Guide* and the *Implementation Checklist*, which are downloadable under the resources section of the module. Remember that if not used with fidelity, the intervention may be less effective and the student may become confused.

Use the VM Planning Worksheet before using the practice.

Step 2: Using VM

This section describes the process of using video modeling and includes following the unique steps of the video modeling procedure, and providing prompting and reinforcement.

2.1 Arrange the environment for the video modeling intervention

The location for viewing the video should be as free of distractions as possible, with appropriate (non-glaring) lighting, and where the student can sit or stand comfortably to view at eye level. The materials needed for demonstrating the skill following the video modeling session should be set up and ready.

2.2 Choose a time to show the video to the learner

The video should be shown just *prior* to the student *demonstrating* the targeted skill. Incorporate the video of the task into the student's routine or schedule.

2.3 Show the video

Many students with ASD will watch the video without any difficulty; however, some may need additional prompting and reinforcement to attend to the entire video. Initially, the adult may have to sit and watch the video with the student.

Step 2: Using VM (continued)

2.4 Prompt the learner to perform the skill or behavior

After the student watches the video, the student demonstrates the behavior or skill.

2.5 Reinforce performance of all or part of the skill or behavior

Initially, reinforcement should be given every time the learner performs the behavior or target skill. As the learner uses the skill or behavior more consistently the reinforcement can be thinned to an intermittent reinforcement schedule.

2.6 Provide error correction, if needed

This procedure can be used if a learner continues to make mistakes with certain parts of the target behavior or skill. Only the particular scene where the mistake occurs is played for the learner to re-watch and practice. For example, if a learner correctly performs all the steps in washing their hands, except drying them once they are washed, then the section of the video that shows the model drying their hands would be the only piece shown.

2.7 Fade the video model

By delaying the start of the video or ending it before it is over, less of the video is shown. When the amount of the video is gradually decreased, the learner sees less of the video modeling. This procedure is maintained if the learner continues to use the target behavior successfully.

Step 3: Monitoring VM

The following process describes how the use of video modeling can be monitored and how to adjust your plan based on the data.

3.1 Collect and analyze data on target behavior

By collecting data on target behaviors and skills, team members are able to determine if the learner is making progress.

Use the VM Event Recording form to monitor behaviors.

Continue →

Step 3: Monitoring VM (continued)

3.2 Determine next steps based on learner progress

If the learner with ASD is showing progress with video modeling based upon collected data, then continue to use this practice with the learner. Gradually, new target skills and behaviors can be introduced to the learner with ASD.

- If the target skill or behavior is not increasing, ask yourself the following questions:
- Is the target behavior well defined?
- Is the target behavior measurable and observable?
- Is the skill too difficult and needs to be broken down into smaller steps (Task Analysis)?
- Does the learner have the needed prerequisite skills for video modeling?
- Has enough time been devoted to using this strategy?
- Was video modeling used with fidelity? (Use the Video Modeling Implementation Checklist to determine fidelity.)
- Are reinforcers motivating for the learner?

If these issues have been addressed and the learner with ASD continues not to show progress, consider selecting a different evidence-based practice to use with the learner.

Use the VM Troubleshooting Guide to problem-solve.

Video Modeling (VM)
---Implementation Checklist---

Before you start:

Have you...

- ☐ Identified the behavior?
- ☐ Collected baseline data through direct observation?
- ☐ Established a goal or outcome that clearly states **when** the behavior will occur, **what** the target skill is, and **how** the team will know when the skill is mastered.

If the answer to any of these is "no", refer to the "Selecting EBPs" section on the website.

	Observation	1	2	3	4
	Date				
	Observer's Initials				
Step 1: Planning					
1.1	Determine if learner has needed skills				
1.2	Choose the type of VM to use to address the behavior/skill				
1.3	Simplify the task into smaller skills, if needed				
1.4	Select reinforcers to pair with the target skill or behavior				
1.5	Choose the video equipment				
1.6	Create the model and record the video				
	☐ Identify and prepare the model				
	☐ Arrange the environment for recording the video				
	☐ Record the video				
	☐ Edit the video				
	☐ Transfer the video to a viewing device				
1.7	Introduce the viewing equipment to the learner, as needed				
1.8	Train team members to implement the VM with fidelity				
Step 2: Using					
2.1	Arrange the environment for the video modeling intervention				
2.2	Choose a time to show the video to the learner				
2.3	Show the video (as often as needed)				
2.4	Prompt the learner to perform the skill or behavior				
2.5	Reinforce performance of all or part of the skill or behavior				
2.6	Correct errors (if needed)				
2.7	Fade the video model				
Step 3: Monitoring					
3.1	Collect and analyze data on performance of target behavior				
3.2	Determine next steps based on learner progress				

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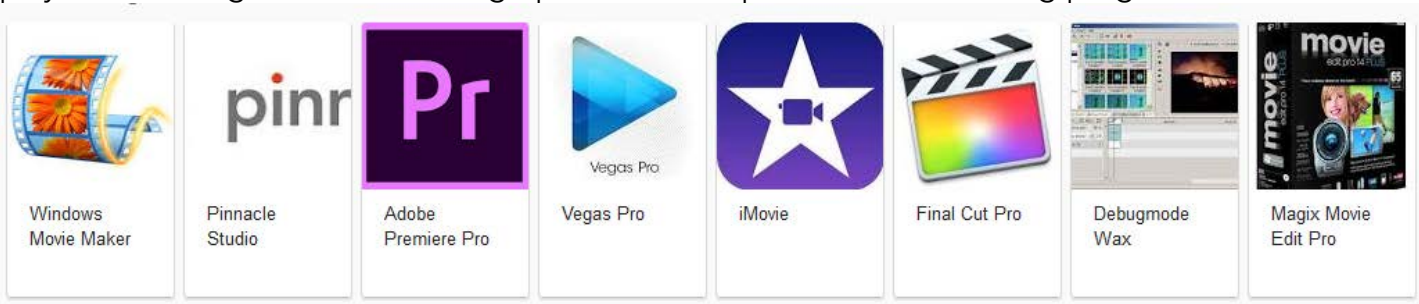
---VM Equipment Checklist---

Three specific equipment functions may be needed in order to use video modeling as an effective intervention. These include:

- equipment to Record the behavior or skill,
- software to Edit the video once it is recorded (if necessary), and
- a device for the learner to View the video model.

Place a check mark for each available item and its functionality. Check device specifications for playback/viewing and video editing options. Some possible video editing programs are:



Available Equipment	Record	View	Edit
☐ Smartphone	☐	☐	☐
☐ Tablet	☐	☐	☐
☐ Video Camera	☐	☐	☐
☐ Laptop Computer	☐	☐	☐
☐ Desktop Computer	☐	☐	☐
☐ Other:	☐	☐	☐

Is additional technology equipment needed to create the video, if so what is needed? _____

_____

_____

For more information, visit:
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---VM Planning Worksheet---

Learner's Name: _____ Date/Time: _____

Observer(s): _____

Target Behavior: _____

_____

Determine the Learner's Prerequisite Skills:

Does the learner imitate others? _____

_____

Does the learner already have some of the skills necessary to perform the target skill? _____

_____

Can the learner sustain attention long enough to observe the modeled behavior? _____

_____

Select Video Modeling Type:

- ☐ Basic
- ☐ Point of view
- ☐ Self-modeling
- ☐ Video prompting

Complete Task Analysis (if needed):

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Determine Reinforcers (refer to *VM Reinforcer Checklist*):

_____

_____

Choose Video Equipment (refer to *VM Equipment Checklist*):

_____

_____

Create the Video:

- ☐ Select and prepare the model
- ☐ Arrange the environment
- ☐ Record
- ☐ Edit (Refer to the *VM Equipment Checklist* for possible editing software)
- ☐ Upload

Introduce Viewing Equipment to the Learner (if needed):

Date introduced to learner _____

Train Team Members:

- ☐ Special education
- ☐ General education
- ☐ Physical education
- ☐ Specials (e.g., music, library, computer, etc.)
- ☐ Paraprofessionals/Teaching assistants
- ☐ Speech therapist
- ☐ Occupational therapist
- ☐ Physical therapist
- ☐ Other: _____

For more information visit:
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---VM Reinforcer Checklist---

Learner's Name: _____ Date/Time: _____

Observer(s): _____

Use the reinforcer checklist to help identify appropriate reinforcers. This list includes some generic items/foods/interests, but keep in mind that a reinforcer may be anything that is interesting and motivating to the learner.

Foods for Snacks/Mealtime Routines:

- ☐ Goldfish
- ☐ Pizza
- ☐ Chicken Nuggets
- ☐ Fruit
- ☐ French Fries
- ☐ Pretzels
- ☐ Chips
- ☐ Cheese
- ☐ Ice Cream
- ☐
- ☐
- ☐

Games for Play/Recess Routines:

- ☐ Peek-a-boo
- ☐ Chase
- ☐ Burrito games with a blanket
- ☐ Pat-a-Cake
- ☐ Tickle games
- ☐
- ☐
- ☐
- ☐

Toys for Play/Recess Routines:

- ☐ Trains and Cars
- ☐ Legos
- ☐ Remote controls
- ☐ Phones
- ☐ Computer
- ☐ Puzzles
- ☐ Noisy toys
- ☐ Doll house
- ☐ Books
- ☐
- ☐
- ☐

Special Interests for Activities/Routines:

- ☐ Movie:
- ☐ Movie Character:
- ☐ Letters
- ☐ Numbers
- ☐
- ☐ TV Show:
- ☐ TV Show Character:
- ☐ Cars, Trains, Trucks
- ☐ Dinosaurs
- ☐
- ☐ Real-Life Person:
- ☐ Video Game:
- ☐ Music
- ☐ Computers/Technology
- ☐

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---Event Sampling Data Collection---

Learner's Name: _____ Date/Time: _____

Observer(s): _____

Target Behavior(s): _____

_____

Event Sampling:

Use event recording to collect the frequency data at every instance the behavior occurs.

Date	Skill/Target Behavior	Total	Notes

For more information visit:
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---VM Troubleshooting Guide---

If there is not improvement after collecting monitoring data for three to five sessions (events or trials), refer to the problems and possible solutions below. Work with members of the learner's team to determine if sufficient progress is being made based upon the data collected.

Problem	Possible Solutions
The learner is not making any improvement	• Show the video model again before asking the learner to demonstrate the targeted skill. • Determine if there is too much time between watching the video model and performing the task. If significant lag occurs, the learner may not remember what they have observed.
The learner does not want to watch or sit through the entire video	• Sit with the learner or include peers when viewing the VM. It might be beneficial to exaggerate the learner's performance (e.g., "WOW!! Look at who is in the video!" "That is GREAT! Let's watch it again to see what they are doing!"). Positive reinforcement is important to keep learners motivated. • Provide positive reinforcement while watching the video to gain and/or keep the learner's attention. For example, verbal reinforcers like "You are doing a great job watching the video!"
The video model does not focus the learner on the target behavior	• The video might be too complex. • The learner might not have the skills (e.g., imitation, learn by observation) needed to benefit from video modeling. • The video might not provide enough stimuli to keep the learner focused.

For more information, visit:
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Video Modeling (VM)
---Professional's Guide---

Video Modeling VM

Video modeling…

- Is an evidence-based practice for children and youth with autism spectrum disorder (ASD) 0-22 years old that can be implemented in multiple settings.
- Involves the learner with ASD viewing the video model of the target behavior before demonstrating the target behavior.

Why Use?

- Learners with ASD often struggle with acquiring new target skills or behaviors.
- Video modeling increases the ability of learners with ASD to perform the target behavior.
- VM is a popular and effective EBP.

Outcomes

- The evidence–base for VM supports the use of this practice to address the outcomes below:

Early Intervention (0-2)	Preschool (3-5)	Elementary (6-11)	Middle (12-14)	High (15-22)
	Social	Social	Social	Social
Communication	Communication	Communication		
	Joint Attention	Joint Attention		
		Behavior	Behavior	
	School-Readiness	School-Readiness	School-Readiness	
Play	Play	Play	Play	Play
		Cognitive		
	Motor			
	Adaptive	Adaptive	Adaptive	Adaptive
		Vocational	Vocational	Vocational
	Academic	Academic		

TIPS:

- Before using VM, make sure the learner can imitate others' behaviors and sustain attention long enough to watch the video model perform the target skill.
- Prepare the model and the learner before using VM.
- Select equipment that is easy to use and available.
- Make certain that others know how to use VM with fidelity to increase generalization.

Video Modeling (VM)
---Professional's Guide---

STEPS FOR IMPLEMENTING

1. Plan

- Determine if learner has needed skills
- Choose the type of VM to use to address the behavior/skill
- Simplify the task into smaller skills, if needed
- Select reinforcers to pair with the target skill or behavior
- Choose the video equipment
- Create the model and record the video
- Introduce the viewing equipment to the learner, as needed
- Train team members to implement the VM with fidelity

2. Use

- Arrange the environment for the video modeling intervention
- Choose a time to show the video to the learner
- Show the video (as often as needed)
- Prompt the learner to perform the skill or behavior
- Reinforce performance of all or part of the skill or behavior
- Correct errors (if needed)
- Fade the video model

3. Monitor

- Collect and analyze data on performance of target behavior
- Determine next steps based on learner progress

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Video Modeling (VM)
---Parent's Guide---

This parent introduction to video modeling was designed as a supplemental resource to help answer basic questions about this practice.

To find out more about how video modeling is used with your child, speak with:

_____

For more information visit:
www.afirm.fpg.unc.edu

This introduction provides basic information about video modeling.

What is a VM?

- Video modeling is an evidence-based practice for children and youth with autism spectrum disorder (ASD) from 0 to 22 years old.
- A model (i.e., peer or adult) is recorded demonstrating a desired behavior which is later viewed by the learner with ASD prior to the learner attempting to replicate what was demonstrated by the video model.

Why use VM with my child?

- Learners with ASD often struggle with acquiring new target skills or behaviors.
- Using a video model to view new skills has previously been successful in helping learners with ASD acquire or improve a range of skills and has been found to be highly motivating.
- Video modeling provides a visual demonstration of an appropriate skill for the learner with ASD to replicate and increases the likelihood that he or she will learn.

What activities can I do at home?

- Make a list of common activities you would like your child to do on a daily basis (such as brushing teeth, putting on shoes, saying "hello"). Choose three activities from the list to begin video modeling for your child.
- When your child performs an activity successfully, be sure to praise your child. It might also be helpful to provide time with a favorite toy or activity when completing an activity.

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Check out these resources to support your use of Video Modeling.

For more information visit:
www.afirm.fpg.unc.edu

---Additional Resources---

Articles:

Acar, C., Tekin-Iftar, E., & Yikmis, A. (2017). Effects of mother-delivered social stories and video modeling in teaching social skills to children with autism spectrum disorders. *Journal of Special Education, 50*(4), 2015.

Cardinal, J. R., Gabrielsen, T. P., Young, E. L., Hansen, B. D., Kellems, R., Hoch, H., . . . Knorr, J. (2017). Discrete trial teaching interventions for students with autism: Web-based video modeling for paraprofessionals. *Journal of Special Education Technology, 32*(3), 138-148. doi:10.1177/0162643417704437

Chen, C., Lee, I., & Lin, L. (2016). Augmented reality-based video-modeling storybook of nonverbal facial cues for children with autism spectrum disorder to improve their perceptions and judgments of facial expressions and emotions. *Computers in Human Behavior, 55*, 477-485. doi:10.1016/j.chb.2015.09.033

English, D., Gounden, S., Dagher, R., Chan, S., Furlonger, B., Anderson, A., & Moore, D. (2017). Effects of video modeling with video feedback on vocational skills of adults with autism spectrum disorder. *Developmental Neurorehabilitation, 20*(8), 511-524. doi:10.1080/17518423.2017.1282051

Genc-Tosun, D., & Kurt, O. (2017). Effects of video modeling on the instructional efficiency of simultaneous prompting among preschoolers with autism spectrum disorder. *Education and Training in Autism and Developmental Disabilities, 52*(3), 291.

Halle, S., Ninness, C., Ninness, S. K., & Lawson, D. (2016). Teaching social skills to students with autism: A video modeling social stories approach. *Behavior and Social Issues, 25*, 42. doi:10.5210/bsi.v25i0.6190

Hochhauser, M., Weiss, P. L., & Gal, E. (2017). Enhancing conflict negotiation strategies of adolescents with autism spectrum disorder using video modeling. *Assistive Technology*, 1-12. doi:10.1080/10400435.2016.1268217

Kim, S. (2016). Use of video modeling to teach developmentally appropriate play with Korean American children with autism. *Research and Practice for Persons with Severe Disabilities, 41*(3), 158-172. doi:10.1177/1540796916658015

Lee, S. Y., Lo, Y., & Lo, Y. (2017). Teaching functional play skills to a young child with autism spectrum disorder through video self-modeling. *Journal of Autism and Developmental Disorders, 47*(8), 2295-2306. doi:10.1007/s10803-017-3147-8

Rausa, V., Moore, D., & Anderson, A. (2016;2015;). Use of video modelling to teach complex and meaningful job skills to an adult with autism spectrum disorder. *Developmental Neurorehabilitation, 19*(4), 267-274. doi:10.3109/17518423.2015.1008150

Rosen, R., Weiss, P. L., Zancanaro, M., & Gal, E. (2017). Usability of a video modeling computer application for the vocational training of adolescents with autism spectrum disorder. *British Journal of Occupational Therapy, 80*(4), 208-215. doi:10.1177/0308022616680367

Schaeffer, K. M., Hamilton, K. A., & Bauman Johnson, W. L. (2016). Video self-modeling interventions for students with autism spectrum disorder. *Intervention in School and Clinic, 52*(1), 17-24. doi:10.1177/1053451216630281

Articles (continued):

Schatz, R. B., Peterson, R. K., & Bellini, S. (2016). The use of video self-modeling to increase on-task behavior in children with high-functioning autism. *Journal of Applied School Psychology, 32*(3), 234-253. doi:10.1080/15377903.2016.1183542

Spriggs, A. D., Gast, D. L., & Knight, V. F. (2016). Video modeling and observational learning to teach gaming access to students with ASD. *Journal of Autism and Developmental Disorders, 46*(9), 2845-2858. doi:10.1007/s10803-016-2824-3

Yakubova, G., Hughes, E. M., & Shinaberry, M. (2016). Learning with technology: Video modeling with Concrete–Representational–Abstract sequencing for students with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 46*(7), 2349-2362. doi:10.1007/s10803-016-2768-7

Apps:


Autism Emotion by Model Me Kids, LLC (Free)


iModeling – Skills for Autism Spectrum Disorder by Autism SA ($9.99)


iMovie by Apple (Free)


Model Me Going Places 2 by Model Me Kids, LLC (Free)


ReelDirector II by NEXVIO INC. ($1.99)

Books:

Buggey, T. (2009). *Seeing is believing: Video self-modeling for people with autism and other developmental disabilities.* Woodbine House.

Dittoe, C., & Bridgman, H. (2017). *Show me!: A teacher's guide to video modeling.* Aapc Publishing.

Lockwood, S. (2018). *Video modeling: Visual-based strategies proven to help people on the autism spectrum.* Future Horizons.

Noland, B., & Murray, S. (2012). *Video modeling for young children with autism spectrum disorders.* Jessica Kingsley Publishers.

Sigafoos, J., O'Reilly, M., & de la Cruz, B. (2007). *How to use video modeling and video prompting (Pro-ed series on autism spectrum disorders).* Pro ed.

Website:

Merrill, A., & Risch, J. (2014). Implementation and Effectiveness of Using Video Self-Modeling with Students with ASD. *The Reporter, 19*(6). Retrieved on January 17, 2018 from https://www.iidc.indiana.edu/pages/video-self-modeling

Video Modeling CEC Standards

Autism Focused Intervention Resources & Modules

The CEC Standards that apply to all 27 evidence-based practices can be found on our website at: http://afirm.fpg.unc.edu/learn-afirm

Below are CEC Standards that apply specifically to Video Modeling (VM) module.

Standard	Description
Initial Preparation Standard 2: Learning Environments	
ISCI 2 K5	Social skills needed for educational and other environments
Initial Preparation Standard 3: Curricular Content Knowledge	
DDA3 S2	Provide individuals with developmental disabilities/autism spectrum disorders strategies to avoid and repair miscommunications
DDA3 S5	Use specialized instruction to enhance social participation across environments
Initial Preparation Standard 5: Instructional Planning & Strategies	
ISCI 5 S19	Use strategies to support and enhance communication skills of individuals with exceptionalities
DDA5 S3	Provide specialized instruction for spoken language, reading and writing for individuals with developmental disabilities/autism spectrum disorders
DDA5 S15	Use specialized instruction to enhance social participation across environments

Standard	Description
Advanced Preparation Standard 3: Programs, Services, and Outcomes	
SEDAS3 S8	Provide varied instruction and opportunity to learn play and leisure skills

For more information visit:
www.afirm.fpg.unc.edu

---Module References---

1. Sigafoos, J., O'Reilly, M., & de la Cruz, B. (2007). *How to use video modeling and video prompting*. Austin, TX: Pro-Ed.
2. Hitchcock, S.H., Dowrick, P.W., & Prater, M.A. (2003). Video self-modeling intervention in school-based settings: A review. *Remedial and Special Education, 24*, 34-45, 56.
3. Coyle, C., & Cole, P. (2004). A videotaped self-modelling and self-monitoring treatment program to decrease off-task behaviour in children with autism. *Journal of Intellectual and Developmental Disability, 29*(1), 3-16. doi: 10.1080/08927020410001662642
4. Marcus, A., & Wilder, D. A. (2009). A comparison of peer video modeling and self video modeling to teach textual responses in children with autism. *Journal of Applied Behavior Analysis, 42*(2), 335-341. doi: 10.1901/jaba.2009.42-335
5. Apple, A. L., Billingsley, F., Schwartz, I. S., & Carr, E. G. (2005). Effects of video modeling alone and with self-management on compliment-giving behaviors of children with high-functioning ASD. *Journal of Positive Behavior Interventions, 7*(1), 33-46. doi: 10.1177/10983007050070010401
6. Buggey, T., Hoomes, G., Sherberger, M. E., & Williams, S. (2011). Facilitating social initiations of preschoolers with autism spectrum disorders using video self-modeling. *Focus on Autism and Other Developmental Disabilities, 26*(1), 25-36. doi: 10.1177/1088357609344430
7. Plavnick, J. B., & Ferreri, S. J. (2011). Establishing verbal repertoires in children with autism using function - based video modeling. *Journal of Applied Behavior Analysis, 44*(4), 747-766. doi: 10.1901/jaba.2011.44-747
8. Cihak, D., Fahrenkrog, C., Ayres, K. M., & Smith, C. (2010). The use of video modeling via a video iPod and a system of least prompts to improve transitional behaviors for students with autism spectrum disorders in the general education classroom. *Journal of Positive Behavior Interventions, 12*(2), 103-115. doi: 10.1177/1098300709332346
9. Reeve, S. A., Reeve, K. F., Townsend, D. B., & Poulson, C. L. (2007). Establishing a generalized repertoire of helping behavior in children with autism. *Journal of Applied Behavior Analysis, 40*(1), 123-136. doi: 10.1901/jaba.2007.11-05
10. Nikopoulos, C. K., & Keenan, M. (2003). Promoting social initiation in children with autism using video modeling. *Behavioral interventions, 18*(2), 87-108. doi: 10.1002/bin.129
11. Allen, K. D., Wallace, D. P., Greene, D. J., Bowen, S. L., & Burke, R. V. (2010). Community-based vocational instruction using videotaped modeling for young adults with autism spectrum disorders performing in air-inflated mascots. *Focus on Autism and Other Developmental Disabilities, 25*(3), 186-192. doi: 10.1177/1088357610377318
12. 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: Which is better, "self" or "other" as a model? *Behavior Modification, 25*(1), 140-158. doi: 10.1177/0145445501251008

---Module References---

13. Haring, T. G., Breen, C. G., Weiner, J., Kennedy, C. H., & Bednersh, F. (1995). Using videotape modeling to facilitate generalized purchasing skills. *Journal of Behavioral Education, 5*(1), 29-53. doi: 10.1007/BF02110213
14. Cannella-Malone, H. I., Fleming, C., Chung, Y. C., Wheeler, G. M., Basbagill, A. R., & Singh, A. H. (2011). Teaching daily living skills to seven individuals with severe intellectual disabilities: A comparison of video prompting to video modeling. *Journal of Positive Behavior Interventions, 13*(3), 144-153. doi: 10.1177/1098300710366593
15. 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*(3), 253-264. doi: 10.1023/A:1021800716392
16. Kroeger, K. A., Schultz, J. R., & Newsom, C. (2007). A comparison of two group-delivered social skills programs for young children with autism. *Journal of Autism and Developmental Disorders, 37*(5), 808-817. doi: 10.1007/s10803-006-0207-x
17. 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*(1), 5-11. doi: 10.1177/10983007030050010801
18. Kleeberger, V., & Mirenda, P. (2010). Teaching generalized imitation skills to a preschooler with autism using video modeling. *Journal of Positive Behavior Interventions, 12*(2), 116-127. doi: 10.1177/1098300708329279
19. Wong, C., Odom, S. L., Hume, K. Cox, A. W., Fettig, A., Kucharczyk, S., Schultz, T. R. (2014). Evidence-based practices for children, youth, and young adults with autism spectrum disorder. Chapel Hill: The University of North Carolina, Frank Porter Graham Child Development Institute, Autism Evidence-Based Practice Review Group. http://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/imce/documents/2014-EBP-Report.pdf
20. Cooper, J.O., Heron, T.E., & Heward, W.L. (2007). *Applied behavior analysis*, 2nd ed. New Jersey: Prentice Hall
21. Rush, K. S., Mortenson, B. P., & Birch, S. E. (2010). Evaluation of preference assessment procedures for use with infants and toddlers. *International Journal of Behavioral Consultation and Therapy, 6*(1), 2.